

10/567894

FBRIC54.001APC_SeqList.txt
SEQUENCE LISTING

<110> Garvan Institute of Medical Research
James, David
Govers, Roland

<120> Novel Translocation Assay

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<150> AU2003904237

<151> 2003-08-08

<150> PCT/AU2004/001057

<151> 2004-08-09

<160> 64

<170> PatentIn version 3.3

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Leu Ala Val Phe Ser Ala Val Leu Gly Ser Leu Gln Phe Gly Tyr Asn
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Ile Gly Val Ile Asn Ala Pro Gln Lys Val Ile Glu Gln Ser Tyr Asn
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75 80 85

gtg ggc ggc atg att tcc tcc ttc ctc att ggt atc atc tct cag tgg 460
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Gly Ala Leu Gly Thr Leu Asn Gln Leu Ala Ile Val Ile Gly Ile Leu	
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Glu Ser Pro Arg Tyr Leu Tyr Ile Ile Gln Asn Leu Glu Gly Pro Ala
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His Leu Leu Gly Leu Ala Gly Met Cys Gly Cys Ala Ile Leu Met Thr
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Pro Ser Ser Ile Pro Pro Gly Thr Leu Thr Thr Leu Trp Ala Leu Ser
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Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe Ile Ile Gly Met	
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Gly Pro Glu Ile Asp Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Gly
65 70 75 80
Pro Ser Ser Ile Pro Pro Gly Thr Leu Thr Thr Leu Trp Ala Leu Ser
85 90 95

FBRIC54.001APC_SeqList.txt

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 260 265 270
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 275 280 285
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 Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn Ala Val Phe Tyr
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FBRIC54.001APC_SeqList.txt

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85 90 95

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Arg Ala Met Leu Val Asn Asn Val Leu Ala Val Leu Gly Gly Ser Leu
115 120 125

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130 135 140

Arg Phe Leu Ile Gly Ala Tyr Ser Gly Leu Thr Ser Gly Leu Val Pro
145 150 155 160

Met Tyr Val Gly Glu Ile Ala Pro Thr His Leu Arg Gly Ala Leu Gly
165 170 175

Thr Leu Asn Gln Leu Ala Ile Val Ile Gly Ile Leu Ile Ala Gln Val
180 185 190

Leu Gly Leu Glu Ser Leu Leu Gly Thr Ala Ser Leu Trp Pro Leu Leu
195 200 205

Leu Gly Leu Thr Val Leu Pro Ala Leu Leu Gln Leu Val Leu Leu Pro
210 215 220

Phe Cys Pro Glu Ser Pro Arg Tyr Leu Tyr Ile Ile Gln Asn Leu Glu
225 230 235 240

Gly Pro Ala Arg Lys Ser Leu Lys Arg Leu Thr Gly Trp Ala Asp Val
245 250 255

Ser Gly Val Leu Ala Glu Leu Lys Asp Glu Lys Arg Lys Leu Glu Arg
260 265 270

FBRIC54.001APC_SeqList.txt

Glu Arg Pro₂₇₅ Leu Ser Leu Leu Gln₂₈₀ Leu Leu Gly Ser Arg₂₈₅ Thr His Arg

Gln Pro₂₉₀ Leu Ile Ile Ala Val₂₉₅ Val Leu Gln Leu Ser₃₀₀ Gln Gln Leu Ser

Gly Ile Asn Ala Val₃₁₀ Phe Tyr Tyr Ser Thr₃₁₅ Ile Phe Glu Thr Ala₃₂₀

Gly Val Gly Gln Pro₃₂₅ Ala Tyr Ala Thr Ile₃₃₀ Gly Ala Gly Val Val₃₃₅ Asn

Thr Val Phe Thr₃₄₀ Leu Val Ser Val₃₄₅ Leu Leu Val Glu Arg Ala₃₅₀ Gly Arg

Arg Thr₃₅₅ Leu His Leu Leu Gly₃₆₀ Leu Ala Gly Met Cys Gly₃₆₅ Cys Ala Ile

Leu Met₃₇₀ Thr Val Ala Leu₃₇₅ Leu Leu Leu Glu Arg Val₃₈₀ Pro Ala Met Ser

Tyr Val Ser Ile Val₃₉₀ Ala Ile Phe Gly Phe Val₃₉₅ Ala Phe Phe Glu Ile₄₀₀

Gly Pro Gly Pro Ile₄₀₅ Pro Trp Phe Ile Val₄₁₀ Ala Glu Leu Phe Ser₄₁₅ Gln

Gly Pro Arg Pro₄₂₀ Ala Ala Met Ala Val₄₂₅ Ala Gly Phe Ser Asn₄₃₀ Trp Thr

Ser Asn Phe Ile Ile Gly Met₄₄₀ Gly Phe Gln Tyr Val₄₄₅ Ala Glu Ala Met

Gly Pro Tyr Val Phe Leu₄₅₅ Leu Phe Ala Val Leu₄₆₀ Leu Leu Gly Phe Phe

Ile Phe Thr Phe Leu Arg₄₇₀ Val Pro Glu Thr Arg₄₇₅ Gly Arg Thr Phe Asp₄₈₀

Gln Ile Ser Ala Ala₄₈₅ Phe His Arg Thr Pro₄₉₀ Ser Leu Leu Glu Gln₄₉₅ Glu

Val Lys Pro Ser₅₀₀ Ser Ile Glu Pro Ala₅₀₅ Lys Glu Thr Thr Thr₅₁₀ Asn Val

FBRIC54.001APC_SeqList.txt

<210> 6
 <211> 512
 <212> PRT
 <213> Artificial sequence
 <220>
 <223> TAIL mutant of Homo sapiens GLUT4 with HA tag
 <400> 6

Met Pro Ser Gly Phe Gln Gln Ile Gly Ser Glu Asp Gly Glu Pro Pro
 1 5 10 15
 Gln Gln Arg Val Thr Gly Thr Leu Val Leu Ala Val Phe Ser Ala Val
 20 25 30
 Leu Gly Ser Leu Gln Phe Gly Tyr Asn Ile Gly Val Ile Asn Ala Pro
 35 40 45
 Gln Lys Val Ile Glu Gln Ser Tyr Asn Glu Thr Trp Leu Gly Arg Gln
 50 55 60
 Gly Pro Glu Ile Asp Glu Gly Pro Ser Ser Ile Pro Pro Gly Thr Leu
 65 70 75 80
 Thr Thr Leu Trp Ala Leu Ser Val Ala Ile Phe Ser Val Gly Gly Met
 85 90 95
 Ile Ser Ser Phe Leu Ile Gly Ile Ile Ser Gln Trp Leu Gly Arg Lys
 100 105 110
 Arg Ala Met Leu Val Asn Asn Val Leu Ala Val Leu Gly Gly Ser Leu
 115 120 125
 Met Gly Leu Ala Asn Ala Ala Ala Ser Tyr Glu Met Leu Ile Leu Gly
 130 135 140
 Arg Phe Leu Ile Gly Ala Tyr Ser Gly Leu Thr Ser Gly Leu Val Pro
 145 150 155 160
 Met Tyr Val Gly Glu Ile Ala Pro Thr His Leu Arg Gly Ala Leu Gly
 165 170 175
 Thr Leu Asn Gln Leu Ala Ile Val Ile Gly Ile Leu Ile Ala Gln Val
 180 185 190
 Leu Gly Leu Glu Ser Leu Leu Gly Thr Ala Ser Leu Trp Pro Leu Leu
 195 200 205

FBRIC54.001APC_SeqList.txt

Leu Gly Leu Thr Val Leu Pro Ala Leu Leu Gln Leu Val Leu Leu Pro
210 215 220

Phe Cys Pro Glu Ser Pro Arg Tyr Leu Tyr Ile Ile Gln Asn Leu Glu
225 230 235 240

Gly Pro Ala Arg Lys Ser Leu Lys Arg Leu Thr Gly Trp Ala Asp Val
245 250 255

Ser Gly Val Leu Ala Glu Leu Lys Asp Glu Lys Arg Lys Leu Glu Arg
260 265 270

Glu Arg Pro Leu Ser Leu Leu Gln Leu Leu Gly Ser Arg Thr His Arg
275 280 285

Gln Pro Leu Ile Ile Ala Val Val Leu Gln Leu Ser Gln Gln Leu Ser
290 295 300

Gly Ile Asn Ala Val Phe Tyr Tyr Ser Thr Ser Ile Phe Glu Thr Ala
305 310 315 320

Gly Val Gly Gln Pro Ala Tyr Ala Thr Ile Gly Ala Gly Val Val Asn
325 330 335

Thr Val Phe Thr Leu Val Ser Val Leu Leu Val Glu Arg Ala Gly Arg
340 345 350

Arg Thr Leu His Leu Leu Gly Leu Ala Gly Met Cys Gly Cys Ala Ile
355 360 365

Leu Met Thr Val Ala Leu Leu Leu Leu Glu Arg Val Pro Ala Met Ser
370 375 380

Tyr Val Ser Ile Val Ala Ile Phe Gly Phe Val Ala Phe Phe Glu Ile
385 390 395 400

Gly Pro Gly Pro Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln
405 410 415

Gly Pro Arg Pro Ala Ala Met Ala Val Ala Gly Phe Ser Asn Trp Thr
420 425 430

Ser Asn Phe Ile Ile Gly Met Gly Phe Gln Tyr Val Ala Glu Ala Met
435 440 445

Gly Pro Tyr Val Phe Leu Leu Phe Ala Val Leu Leu Leu Gly Phe Phe
450 455 460

FBRIC54.001APC_SeqList.txt

Ile Phe Thr Phe Leu Arg Val Pro Glu Thr Arg Gly Arg Thr Phe Asp
465 470 475 480

Gln Ile Ser Ala Ala Phe His Arg Thr Pro Ser Ala Ala Glu Gln Glu
485 490 495

Val Lys Pro Ser Thr Glu Leu Glu Tyr Leu Gly Pro Asp Glu Asn Asp
500 505 510

<210> 7
<211> 521
<212> PRT
<213> Artificial sequence

<220>
<223> L489,490A mutant of Homo sapiens GLUT4 with HA tag

<400> 7

Met Pro Ser Gly Phe Gln Gln Ile Gly Ser Glu Asp Gly Glu Pro Pro
1 5 10 15

Gln Gln Arg Val Thr Gly Thr Leu Val Leu Ala Val Phe Ser Ala Val
20 25 30

Leu Gly Ser Leu Gln Phe Gly Tyr Asn Ile Gly Val Ile Asn Ala Pro
35 40 45

Gln Lys Val Ile Glu Gln Ser Tyr Asn Glu Thr Trp Leu Gly Arg Gln
50 55 60

Gly Pro Glu Ile Asp Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Gly
65 70 75 80

Pro Ser Ser Ile Pro Pro Gly Thr Leu Thr Thr Leu Trp Ala Leu Ser
85 90 95

Val Ala Ile Phe Ser Val Gly Gly Met Ile Ser Ser Phe Leu Ile Gly
100 105 110

Ile Ile Ser Gln Trp Leu Gly Arg Lys Arg Ala Met Leu Val Asn Asn
115 120 125

Val Leu Ala Val Leu Gly Gly Ser Leu Met Gly Leu Ala Asn Ala Ala
130 135 140

Ala Ser Tyr Glu Met Leu Ile Leu Gly Arg Phe Leu Ile Gly Ala Tyr
145 150 155 160

FBRIC54.001APC_SeqList.txt

Ser Gly Leu Thr Ser Gly Leu Val Pro Met Tyr Val Gly Glu Ile Ala
165 170 175

Pro Thr His Leu Arg Gly Ala Leu Gly Thr Leu Asn Gln Leu Ala Ile
180 185 190

Val Ile Gly Ile Leu Ile Ala Gln Val Leu Gly Leu Glu Ser Leu Leu
195 200 205

Gly Thr Ala Ser Leu Trp Pro Leu Leu Leu Gly Leu Thr Val Leu Pro
210 215 220

Ala Leu Leu Gln Leu Val Leu Leu Pro Phe Cys Pro Glu Ser Pro Arg
225 230 235 240

Tyr Leu Tyr Ile Ile Gln Asn Leu Glu Gly Pro Ala Arg Lys Ser Leu
245 250 255

Lys Arg Leu Thr Gly Trp Ala Asp Val Ser Gly Val Leu Ala Glu Leu
260 265 270

Lys Asp Glu Lys Arg Lys Leu Glu Arg Glu Arg Pro Leu Ser Leu Leu
275 280 285

Gln Leu Leu Gly Ser Arg Thr His Arg Gln Pro Leu Ile Ile Ala Val
290 295 300

Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn Ala Val Phe Tyr
305 310 315 320

Tyr Ser Thr Ser Ile Phe Glu Thr Ala Gly Val Gly Gln Pro Ala Tyr
325 330 335

Ala Thr Ile Gly Ala Gly Val Val Asn Thr Val Phe Thr Leu Val Ser
340 345 350

Val Leu Leu Val Glu Arg Ala Gly Arg Arg Thr Leu His Leu Leu Gly
355 360 365

Leu Ala Gly Met Cys Gly Cys Ala Ile Leu Met Thr Val Ala Leu Leu
370 375 380

Leu Leu Glu Arg Val Pro Ala Met Ser Tyr Val Ser Ile Val Ala Ile
385 390 395 400

FBRIC54.001APC_SeqList.txt

Phe Gly Phe Val Ala Phe Phe Glu Ile Gly Pro Gly Pro Ile Pro Trp
405 410 415

Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg Pro Ala Ala Met
420 425 430

Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe Ile Ile Gly Met
435 440 445

Gly Phe Gln Tyr Val Ala Glu Ala Met Gly Pro Tyr Val Phe Leu Leu
450 455 460

Phe Ala Val Leu Leu Leu Gly Phe Phe Ile Phe Thr Phe Leu Arg Val
465 470 475 480

Pro Glu Thr Arg Gly Arg Thr Phe Asp Gln Ile Ser Ala Ala Phe His
485 490 495

Arg Thr Pro Ser Ala Ala Glu Gln Glu Val Lys Pro Ser Thr Glu Leu
500 505 510

Glu Tyr Leu Gly Pro Asp Glu Asn Asp
515 520

<210> 8
<211> 512
<212> PRT
<213> Artificial sequence

<220>
<223> F5A mutant of Homo sapiens GLUT4

<400> 8

Met Pro Ser Gly Ala Gln Gln Ile Gly Ser Glu Asp Gly Glu Pro Pro
1 5 10 15

Gln Gln Arg Val Thr Gly Thr Leu Val Leu Ala Val Phe Ser Ala Val
20 25 30

Leu Gly Ser Leu Gln Phe Gly Tyr Asn Ile Gly Val Ile Asn Ala Pro
35 40 45

Gln Lys Val Ile Glu Gln Ser Tyr Asn Glu Thr Trp Leu Gly Arg Gln
50 55 60

Gly Pro Glu Ile Asp Glu Gly Pro Ser Ser Ile Pro Pro Gly Thr Leu
65 70 75 80

FBRIC54.001APC_SeqList.txt

Thr Thr Leu Trp Ala₈₅ Leu Ser Val Ala₉₀ Ile Phe Ser Val Gly₉₅ Gly Met

Ile Ser Ser Phe₁₀₀ Leu Ile Gly Ile₁₀₅ Ile Ser Gln Trp Leu Gly₁₁₀ Arg Lys

Arg Ala Met₁₁₅ Leu Val Asn Asn Val₁₂₀ Leu Ala Val Leu Gly₁₂₅ Gly Ser Leu

Met Gly₁₃₀ Leu Ala Asn Ala₁₃₅ Ala Ala Ser Tyr Glu Met₁₄₀ Leu Ile Leu Gly

Arg Phe Leu Ile Gly Ala₁₅₀ Tyr Ser Gly Leu Thr₁₅₅ Ser Gly Leu Val Pro₁₆₀

Met Tyr Val Gly₁₆₅ Glu Ile Ala Pro Thr His₁₇₀ Leu Arg Gly Ala₁₇₅ Leu Gly

Thr Leu Asn Gln₁₈₀ Leu Ala Ile Val Ile₁₈₅ Gly Ile Leu Ile Ala₁₉₀ Gln Val

Leu Gly Leu₁₉₅ Glu Ser Leu Leu Gly₂₀₀ Thr Ala Ser Leu Trp₂₀₅ Pro Leu Leu

Leu Gly₂₁₀ Leu Thr Val Leu Pro₂₁₅ Ala Leu Leu Gln Leu₂₂₀ Val Leu Leu Pro

Phe Cys Pro Glu Ser Pro₂₃₀ Arg Tyr Leu Tyr Ile₂₃₅ Ile Gln Asn Leu Glu₂₄₀

Gly Pro Ala Arg Lys₂₄₅ Ser Leu Lys Arg Leu₂₅₀ Thr Gly Trp Ala Asp₂₅₅ Val

Ser Gly Val Leu₂₆₀ Ala Glu Leu Lys Asp₂₆₅ Glu Lys Arg Lys Leu₂₇₀ Glu Arg

Glu Arg Pro₂₇₅ Leu Ser Leu Leu Gln₂₈₀ Leu Leu Gly Ser Arg₂₈₅ Thr His Arg

Gln Pro Leu Ile Ile Ala Val₂₉₅ Val Leu Gln Leu Ser₃₀₀ Gln Gln Leu Ser

Gly Ile Asn Ala Val₃₁₀ Phe Tyr Tyr Ser Thr Ser₃₁₅ Ile Phe Glu Thr Ala₃₂₀

Gly Val Gly Gln Pro₃₂₅ Ala Tyr Ala Thr Ile₃₃₀ Gly Ala Gly Val Val₃₃₅ Asn

FBRIC54.001APC_SeqList.txt

Thr Val Phe Thr Leu Val Ser Val Leu Leu Val Glu Arg Ala Gly Arg
340 345 350

Arg Thr Leu His Leu Leu Gly Leu Ala Gly Met Cys Gly Cys Ala Ile
355 360 365

Leu Met Thr Val Ala Leu Leu Leu Glu Arg Val Pro Ala Met Ser
370 375 380

Tyr Val Ser Ile Val Ala Ile Phe Gly Phe Val Ala Phe Phe Glu Ile
385 390 395 400

Gly Pro Gly Pro Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln
405 410 415

Gly Pro Arg Pro Ala Ala Met Ala Val Ala Gly Phe Ser Asn Trp Thr
420 425 430

Ser Asn Phe Ile Ile Gly Met Gly Phe Gln Tyr Val Ala Glu Ala Met
435 440 445

Gly Pro Tyr Val Phe Leu Leu Phe Ala Val Leu Leu Leu Gly Phe Phe
450 455 460

Ile Phe Thr Phe Leu Arg Val Pro Glu Thr Arg Gly Arg Thr Phe Asp
465 470 475 480

Gln Ile Ser Ala Ala Phe His Arg Thr Pro Ser Leu Leu Glu Gln Glu
485 490 495

Val Lys Pro Ser Thr Glu Leu Glu Tyr Leu Gly Pro Asp Glu Asn Asp
500 505 510

<210> 9
<211> 521
<212> PRT
<213> Artificial sequence

<220>
<223> F5A mutant of Homo sapiens with HA tag .

<400> 9

Met Pro Ser Gly Ala Gln Gln Ile Gly Ser Glu Asp Gly Glu Pro Pro
1 5 10 15

Gln Gln Arg Val Thr Gly Thr Leu Val Leu Ala Val Phe Ser Ala Val
20 25 30

FBRIC54.001APC_SeqList.txt

Leu Gly Ser₃₅ Leu Gln Phe Gly₄₀ Tyr Asn Ile Gly Val₄₅ Ile Asn Ala Pro
 Gln Lys₅₀ Val Ile Glu Gln₅₅ Ser Tyr Asn Glu Thr₆₀ Trp Leu Gly Arg Gln
 Gly₆₅ Pro Glu Ile Asp₇₀ Tyr Pro Tyr Asp Val₇₅ Pro Asp Tyr Ala Glu₈₀ Gly
 Pro Ser Ser Ile₈₅ Pro Pro Gly Thr Leu₉₀ Thr Thr Leu Trp Ala₉₅ Leu Ser
 Val Ala Ile₁₀₀ Phe Ser Val Gly Gly₁₀₅ Met Ile Ser Ser Phe₁₁₀ Leu Ile Gly
 Ile Ile Ser₁₁₅ Gln Trp Leu Gly Arg₁₂₀ Lys Arg Ala Met₁₂₅ Leu Val Asn Asn
 Val₁₃₀ Leu Ala Val Leu Gly₁₃₅ Gly Ser Leu Met Gly₁₄₀ Leu Ala Asn Ala Ala
 Ala Ser Tyr Glu Met₁₅₀ Leu Ile Leu Gly Arg₁₅₅ Phe Leu Ile Gly Ala₁₆₀ Tyr
 Ser Gly Leu Thr₁₆₅ Ser Gly Leu Val Pro₁₇₀ Met Tyr Val Gly Glu₁₇₅ Ile Ala
 Pro Thr His₁₈₀ Leu Arg Gly Ala Leu₁₈₅ Gly Thr Leu Asn Gln₁₉₀ Leu Ala Ile
 Val Ile Gly₁₉₅ Ile Leu Ile Ala₂₀₀ Gln Val Leu Gly Leu₂₀₅ Glu Ser Leu Leu
 Gly Thr Ala Ser Leu Trp Pro₂₁₅ Leu Leu Leu Gly₂₂₀ Leu Thr Val Leu Pro
 Ala Leu Leu Gln Leu₂₃₀ Val Leu Leu Pro Phe₂₃₅ Cys Pro Glu Ser Pro Arg₂₄₀
 Tyr Leu Tyr Ile₂₄₅ Ile Gln Asn Leu Glu Gly₂₅₀ Pro Ala Arg Lys₂₅₅ Ser Leu
 Lys Arg Leu Thr₂₆₀ Gly Trp Ala Asp Val₂₆₅ Ser Gly Val Leu₂₇₀ Ala Glu Leu

FBRIC54.001APC_SeqList.txt

Lys Asp Glu Lys Arg Lys Leu Glu Arg Glu Arg Pro Leu Ser Leu Leu
 275 280 285
 Gln Leu Leu Gly Ser Arg Thr His Arg Gln Pro Leu Ile Ile Ala Val
 290 300
 Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn Ala Val Phe Tyr
 305 310 315 320
 Tyr Ser Thr Ser Ile Phe Glu Thr Ala Gly Val Gly Gln Pro Ala Tyr
 325 330 335
 Ala Thr Ile Gly Ala Gly Val Val Asn Thr Val Phe Thr Leu Val Ser
 340 345 350
 Val Leu Leu Val Glu Arg Ala Gly Arg Arg Thr Leu His Leu Leu Gly
 355 360 365
 Leu Ala Gly Met Cys Gly Cys Ala Ile Leu Met Thr Val Ala Leu Leu
 370 375 380
 Leu Leu Glu Arg Val Pro Ala Met Ser Tyr Val Ser Ile Val Ala Ile
 385 390 395 400
 Phe Gly Phe Val Ala Phe Phe Glu Ile Gly Pro Gly Pro Ile Pro Trp
 405 410 415
 Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg Pro Ala Ala Met
 420 425 430
 Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe Ile Ile Gly Met
 435 440 445
 Gly Phe Gln Tyr Val Ala Glu Ala Met Gly Pro Tyr Val Phe Leu Leu
 450 455 460
 Phe Ala Val Leu Leu Leu Gly Phe Phe Ile Phe Thr Phe Leu Arg Val
 465 470 475 480
 Pro Glu Thr Arg Gly Arg Thr Phe Asp Gln Ile Ser Ala Ala Phe His
 485 490 495
 Arg Thr Pro Ser Leu Leu Glu Gln Glu Val Lys Pro Ser Thr Glu Leu
 500 505 510
 Glu Tyr Leu Gly Pro Asp Glu Asn Asp
 515 520

FBRIC54.001APC_SeqList.txt

<210> 10
 <211> 2856
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (180)..(1658)

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 gtcagagtcg cagtgggagt ccccgaccg gagcacgagc ctgagcggga gagcgccgct 120
 cgcacgccccg tcgccacccg cgtacccggc gcagccagag ccaccagcgc agcgctgcc 179
 atg gag ccc agc agc aag aag ctg acg ggt cgc ctc atg ctg gct gtg 227
 Met Glu Pro Ser Ser Lys Lys Leu Thr Gly Arg Leu Met Leu Ala Val
 1 5 10 15
 gga gga gca gtg ctt ggc tcc ctg cag ttt ggc tac aac act gga gtc 275
 Gly Gly Ala Val Leu Gly Ser Leu Gln Phe Gly Tyr Asn Thr Gly Val
 20 25 30
 atc aat gcc ccc cag aag gtg atc gag gag ttc tac aac cag aca tgg 323
 Ile Asn Ala Pro Gln Lys Val Ile Glu Glu Phe Tyr Asn Gln Thr Trp
 35 40 45
 gtc cac cgc tat ggg gag agc atc ctg ccc acc acg ctc acc acg ctc 371
 Val His Arg Tyr Gly Glu Ser Ile Leu Pro Thr Thr Leu Thr Thr Leu
 50 55 60
 tgg tcc ctc tca gtg gcc atc ttt tct gtt ggg ggc atg att ggc tcc 419
 Trp Ser Leu Ser Val Ala Ile Phe Ser Val Gly Gly Met Ile Gly Ser
 65 70 75 80
 ttc tct gtg ggc ctt ttc gtt aac cgc ttt ggc cgg cgg aat tca atg 467
 Phe Ser Val Gly Leu Phe Val Asn Arg Phe Gly Arg Arg Asn Ser Met
 85 90 95
 ctg atg atg aac ctg ctg gcc ttc gtg tcc gcc gtg ctc atg ggc ttc 515
 Leu Met Met Asn Leu Leu Ala Phe Val Ser Ala Val Leu Met Gly Phe
 100 105 110
 tcg aaa ctg ggc aag tcc ttt gag atg ctg atc ctg ggc cgc ttc atc 563
 Ser Lys Leu Gly Lys Ser Phe Glu Met Leu Ile Leu Gly Arg Phe Ile
 115 120 125
 atc ggt gtg tac tgc ggc ctg acc aca ggc ttc gtg ccc atg tat gtg 611
 Ile Gly Val Tyr Cys Gly Leu Thr Thr Gly Phe Val Pro Met Tyr Val
 130 135 140
 ggt gaa gtg tca ccc aca gcc ttt cgt ggg gcc ctg ggc acc ctg cac 659
 Gly Glu Val Ser Pro Thr Ala Phe Arg Gly Ala Leu Gly Thr Leu His
 145 150 155 160
 cag ctg ggc atc gtc gtc ggc atc ctc atc gcc cag gtg ttc ggc ctg 707
 Gln Leu Gly Ile Val Val Gly Ile Leu Ile Ala Gln Val Phe Gly Leu
 165 170 175

FBRIC54.001APC_SeqList.txt

gac tcc atc atg ggc aac aag gac ctg tgg ccc ctg ctg ctg agc atc	755
Asp Ser Ile Met Gly Asn Lys Asp Leu Trp Pro Leu Leu Leu Ser Ile	
180 185 190	
atc ttc atc ccg gcc ctg ctg cag tgc atc gtg ctg ccc ttc tgc ccc	803
Ile Phe Ile Pro Ala Leu Leu Gln Cys Ile Val Leu Pro Phe Cys Pro	
195 200 205	
gag agt ccc cgc ttc ctg ctc atc aac cgc aac gag gag aac cgg gcc	851
Glu Ser Pro Arg Phe Leu Leu Ile Asn Arg Asn Glu Glu Asn Arg Ala	
210 215 220	
aag agt gtg cta aag aag ctg cgc ggg aca gct gac gtg acc cat gac	899
Lys Ser Val Leu Lys Lys Leu Arg Gly Thr Ala Asp Val Thr His Asp	
225 230 235 240	
ctg cag gag atg aag gaa gag agt cgg cag atg atg cgg gag aag aag	947
Leu Gln Glu Met Lys Glu Glu Ser Arg Gln Met Met Arg Glu Lys Lys	
245 250 255	
gtc acc atc ctg gag ctg ttc cgc tcc ccc gcc tac cgc cag ccc atc	995
Val Thr Ile Leu Glu Leu Phe Arg Ser Pro Ala Tyr Arg Gln Pro Ile	
260 265 270	
ctc atc gct gtg gtg ctg cag ctg tcc cag cag ctg tct ggc atc aac	1043
Leu Ile Ala Val Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn	
275 280 285	
gct gtc ttc tat tac tcc acg agc atc ttc gag aag gcg ggg gtg cag	1091
Ala Val Phe Tyr Tyr Ser Thr Ser Ile Phe Glu Lys Ala Gly Val Gln	
290 295 300	
cag cct gtg tat gcc acc att ggc tcc ggt atc gtc aac acg gcc ttc	1139
Gln Pro Val Tyr Ala Thr Ile Gly Ser Gly Ile Val Asn Thr Ala Phe	
305 310 315 320	
act gtc gtg tcg ctg ttt gtg gtg gag cga gca ggc cgg cgg acc ctg	1187
Thr Val Val Ser Leu Phe Val Val Glu Arg Ala Gly Arg Arg Thr Leu	
325 330 335	
cac ctc ata ggc ctc gct ggc atg gcg ggt tgt gcc ata ctc atg acc	1235
His Leu Ile Gly Leu Ala Gly Met Ala Gly Cys Ala Ile Leu Met Thr	
340 345 350	
atc gcg cta gca ctg ctg gag cag cta ccc tgg atg tcc tat ctg agc	1283
Ile Ala Leu Ala Leu Leu Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser	
355 360 365	
atc gtg gcc atc ttt ggc ttt gtg gcc ttc ttt gaa gtg ggt cct ggc	1331
Ile Val Ala Ile Phe Gly Phe Val Ala Phe Phe Glu Val Gly Pro Gly	
370 375 380	
ccc atc cca tgg ttc atc gtg gct gaa ctc ttc agc cag ggt cca cgt	1379
Pro Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg	
385 390 395 400	
cca gct gcc att gcc gtt gca ggc ttc tcc aac tgg acc tca aat ttc	1427
Pro Ala Ala Ile Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe	
405 410 415	
att gtg ggc atg tgc ttc cag tat gtg gag caa ctg tgt ggt ccc tac	1475

FBRIC54.001APC_SeqList.txt

Ile Val Gly Met Cys Phe Gln Tyr Val Glu Gln Leu Cys Gly Pro Tyr	
420 425 430	
gtc ttc atc atc ttc act gtg ctc ctg gtt ctg ttc ttc atc ttc acc	1523
Val Phe Ile Ile Phe Thr Val Leu Val Leu Phe Phe Ile Phe Thr	
435 440 445	
tac ttc aaa gtt cct gag act aaa ggc cgg acc ttc gat gag atc gct	1571
Tyr Phe Lys Val Pro Glu Thr Lys Gly Arg Thr Phe Asp Glu Ile Ala	
450 455 460	
tcc ggc ttc cgg cag ggg gga gcc agc caa agt gat aag aca ccc gag	1619
Ser Gly Phe Arg Gln Gly Gly Ala Ser Gln Ser Asp Lys Thr Pro Glu	
465 470 475 480	
gag ctg ttc cat ccc ctg ggg gct gat tcc caa gtg tga gtcgccccag	1668
Glu Leu Phe His Pro Leu Gly Ala Asp Ser Gln Val	
485 490	
atcaccagcc cggcctgctc ccagcagccc taaggatctc tcaggagcac aggcagctgg	1728
atgagacttc caaacctgac agatgtcagc cgagccgggc ctggggctcc tttctccagc	1788
cagcaatgat gtccagaaga atattcagga cttaacggct ccaggatttt aacaaaagca	1848
agactgttgc tcaaacttat tcagacaagc aacaggtttt ataatttttt tattactgat	1908
tttgttattt ttatatcagc ctgagtctcc tgtgcccaca tcccaggctt caccctgaat	1968
ggttccatgc ctgagggtgg agactaagcc ctgtcgagac acttgccttc ttcaccagc	2028
taatctgtag ggctggacct atgtcctaag gacacactaa tcgaactatg aactacaaag	2088
cttctatccc aggagggtggc tatggccacc cgttctgctg gcctggatct cccactcta	2148
ggggtcaggc tccattagga tttgcccctt cccatctctt cctacccaac cactcaaatt	2208
aatctttctt tacctgagac cagttgggag cactggagtg cagggaggag aggggaaggg	2268
ccagtctggg ctgccgggtt ctagtctcct ttgactgag gccacacta ttaccatgag	2328
aagagggcct gtgggagcct gcaaactcac tgctcaagaa gacatggaga ctctgcctt	2388
gttgtgtata gatgcaagat atttatatat atttttgggt gtcaatatta aatacagaca	2448
ctaagttata gtatatctgg acaagccaac ttgtaaatac accacctcac tcctgttact	2508
tacctaaaca gatataaatg gctggttttt agaaacatgg ttttgaaatg cttgtggatt	2568
gagggtagga ggtttggatg ggagtgagac agaagtaagt ggggttgcaa ccactgcaac	2628
ggcttagact tcgactcagg atccagtccc ttacacgtac ctctcatcag tgtcctcttg	2688
ctcaaaaatc tgtttgatcc ctgttaccca gagaatatat acattcttta tcttgacatt	2748
caaggcattt ctatcacata tttgatagtt ggtgttcaaa aaaacactag ttttgtgcca	2808
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FBRIC54.001APC_SeqList.txt

<212> PRT

<213> Homo sapiens

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20 25 30

Ile Asn Ala Pro Gln Lys Val Ile Glu Glu Phe Tyr Asn Gln Thr Trp
35 40 45

Val His Arg Tyr Gly Glu Ser Ile Leu Pro Thr Thr Leu Thr Thr Leu
50 55 60

Trp Ser Leu Ser Val Ala Ile Phe Ser Val Gly Gly Met Ile Gly Ser
65 70 75 80

Phe Ser Val Gly Leu Phe Val Asn Arg Phe Gly Arg Arg Asn Ser Met
85 90 95

Leu Met Met Asn Leu Leu Ala Phe Val Ser Ala Val Leu Met Gly Phe
100 105 110

Ser Lys Leu Gly Lys Ser Phe Glu Met Leu Ile Leu Gly Arg Phe Ile
115 120 125

Ile Gly Val Tyr Cys Gly Leu Thr Thr Gly Phe Val Pro Met Tyr Val
130 135 140

Gly Glu Val Ser Pro Thr Ala Phe Arg Gly Ala Leu Gly Thr Leu His
145 150 155 160

Gln Leu Gly Ile Val Val Gly Ile Leu Ile Ala Gln Val Phe Gly Leu
165 170 175

Asp Ser Ile Met Gly Asn Lys Asp Leu Trp Pro Leu Leu Leu Ser Ile
180 185 190

Ile Phe Ile Pro Ala Leu Leu Gln Cys Ile Val Leu Pro Phe Cys Pro
195 200 205

Glu Ser Pro Arg Phe Leu Leu Ile Asn Arg Asn Glu Glu Asn Arg Ala
210 215 220

Lys Ser Val Leu Lys Lys Leu Arg Gly Thr Ala Asp Val Thr His Asp
Page 25

FBRIC54.001APC_SeqList.txt

225 230 235 240
 Leu Gln Glu Met Lys Glu Glu Ser Arg Gln Met Met Arg Glu Lys Lys
 245 250 255
 Val Thr Ile Leu Glu Leu Phe Arg Ser Pro Ala Tyr Arg Gln Pro Ile
 260 265 270
 Leu Ile Ala Val Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn
 275 280 285
 Ala Val Phe Tyr Tyr Ser Thr Ser Ile Phe Glu Lys Ala Gly Val Gln
 290 295 300
 Gln Pro Val Tyr Ala Thr Ile Gly Ser Gly Ile Val Asn Thr Ala Phe
 305 310 315 320
 Thr Val Val Ser Leu Phe Val Val Glu Arg Ala Gly Arg Arg Thr Leu
 325 330 335
 His Leu Ile Gly Leu Ala Gly Met Ala Gly Cys Ala Ile Leu Met Thr
 340 345 350
 Ile Ala Leu Ala Leu Leu Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser
 355 360 365
 Ile Val Ala Ile Phe Gly Phe Val Ala Phe Phe Glu Val Gly Pro Gly
 370 375 380
 Pro Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg
 385 390 395 400
 Pro Ala Ala Ile Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe
 405 410 415
 Ile Val Gly Met Cys Phe Gln Tyr Val Glu Gln Leu Cys Gly Pro Tyr
 420 425 430
 Val Phe Ile Ile Phe Thr Val Leu Leu Val Leu Phe Phe Ile Phe Thr
 435 440 445
 Tyr Phe Lys Val Pro Glu Thr Lys Gly Arg Thr Phe Asp Glu Ile Ala
 450 455 460
 Ser Gly Phe Arg Gln Gly Gly Ala Ser Gln Ser Asp Lys Thr Pro Glu
 465 470 475 480

FBRIC54.001APC_SeqList.txt

Glu Leu Phe His Pro Leu Gly Ala Asp Ser Gln Val
485 490

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<211> 1506
<212> DNA
<213> Artificial sequence

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<221> CDS
<222> (1)..(1506)

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gga gga gca gtg ctt ggc tcc ctg cag ttt ggc tac aac act gga gtc		96
Gly Gly Ala Val Leu Gly Ser Leu Gln Phe Gly Tyr Asn Thr Gly Val		
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atc aat gcc ccc cag aag gtg atc gag gag ttc tac aac cag aca tgg		144
Ile Asn Ala Pro Gln Lys Val Ile Glu Glu Phe Tyr Asn Gln Thr Trp		
35 40 45		
gtc cac cgc tat ggg gag agc atc tac cca tac gac gtc cca gac tac		192
Val His Arg Tyr Gly Glu Ser Ile Tyr Pro Tyr Asp Val Pro Asp Tyr		
50 55 60		
gct ctg ccc acc acg ctc acc acg ctc tgg tcc ctc tca gtg gcc atc		240
Ala Leu Pro Thr Thr Leu Thr Thr Leu Trp Ser Leu Ser Val Ala Ile		
65 70 75 80		
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Phe Ser Val Gly Gly Met Ile Gly Ser Phe Ser Val Gly Leu Phe Val		
85 90 95		
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Asn Arg Phe Gly Arg Arg Asn Ser Met Leu Met Met Asn Leu Leu Ala		
100 105 110		
ttc gtg tcc gcc gtg ctc atg ggc ttc tcg aaa ctg ggc aag tcc ttt		384
Phe Val Ser Ala Val Leu Met Gly Phe Ser Lys Leu Gly Lys Ser Phe		
115 120 125		
gag atg ctg atc ctg ggc cgc ttc atc atc ggt gtg tac tgc ggc ctg		432
Glu Met Leu Ile Leu Gly Arg Phe Ile Ile Gly Val Tyr Cys Gly Leu		
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acc aca ggc ttc gtg ccc atg tat gtg ggt gaa gtg tca ccc aca gcc		480
Thr Thr Gly Phe Val Pro Met Tyr Val Gly Glu Val Ser Pro Thr Ala		
145 150 155 160		
ttt cgt ggg gcc ctg ggc acc ctg cac cag ctg ggc atc gtc gtc ggc		528
Phe Arg Gly Ala Leu Gly Thr Leu His Gln Leu Gly Ile Val Val Gly		
165 170 175		

FBRIC54.001APC_SeqList.txt

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gac	ctg	tgg	ccc	ctg	ctg	ctg	agc	atc	atc	ttc	atc	ccg	gcc	ctg	ctg	624
Asp	Leu	Trp	Pro	Leu	Leu	Leu	Ser	Ile	Ile	Phe	Ile	Pro	Ala	Leu	Leu	
		195					200					205				
cag	tgc	atc	gtg	ctg	ccc	ttc	tgc	ccc	gag	agt	ccc	cgc	ttc	ctg	ctc	672
Gln	Cys	Ile	Val	Leu	Pro	Phe	Cys	Pro	Glu	Ser	Pro	Arg	Phe	Leu	Leu	
	210					215					220					
atc	aac	cgc	aac	gag	gag	aac	cgg	gcc	aag	agt	gtg	cta	aag	aag	ctg	720
Ile	Asn	Arg	Asn	Glu	Glu	Asn	Arg	Ala	Lys	Ser	Val	Leu	Lys	Lys	Leu	
225					230					235					240	
cgc	ggg	aca	gct	gac	gtg	acc	cat	gac	ctg	cag	gag	atg	aag	gaa	gag	768
Arg	Gly	Thr	Ala	Asp	Val	Thr	His	Asp	Leu	Gln	Glu	Met	Lys	Glu	Glu	
				245					250					255		
agt	cgg	cag	atg	atg	cgg	gag	aag	aag	gtc	acc	atc	ctg	gag	ctg	ttc	816
Ser	Arg	Gln	Met	Met	Arg	Glu	Lys	Lys	Val	Thr	Ile	Leu	Glu	Leu	Phe	
			260					265					270			
cgc	tcc	ccc	gcc	tac	cgc	cag	ccc	atc	ctc	atc	gct	gtg	gtg	ctg	cag	864
Arg	Ser	Pro	Ala	Tyr	Arg	Gln	Pro	Ile	Leu	Ile	Ala	Val	Val	Leu	Gln	
		275					280					285				
ctg	tcc	cag	cag	ctg	tct	ggc	atc	aac	gct	gtc	ttc	tat	tac	tcc	acg	912
Leu	Ser	Gln	Gln	Leu	Ser	Gly	Ile	Asn	Ala	Val	Phe	Tyr	Tyr	Ser	Thr	
	290					295					300					
agc	atc	ttc	gag	aag	gcg	ggg	gtg	cag	cag	cct	gtg	tat	gcc	acc	att	960
Ser	Ile	Phe	Glu	Lys	Ala	Gly	Val	Gln	Gln	Pro	Val	Tyr	Ala	Thr	Ile	
305					310					315					320	
ggc	tcc	ggt	atc	gtc	aac	acg	gcc	ttc	act	gtc	gtg	tcg	ctg	ttt	gtg	1008
Gly	Ser	Gly	Ile	Val	Asn	Thr	Ala	Phe	Thr	Val	Val	Ser	Leu	Phe	Val	
				325					330					335		
gtg	gag	cga	gca	ggc	cgg	cgg	acc	ctg	cac	ctc	ata	ggc	ctc	gct	ggc	1056
Val	Glu	Arg	Ala	Gly	Arg	Arg	Thr	Leu	His	Leu	Ile	Gly	Leu	Ala	Gly	
			340					345					350			
atg	gcg	ggt	tgt	gcc	ata	ctc	atg	acc	atc	gcg	cta	gca	ctg	ctg	gag	1104
Met	Ala	Gly	Cys	Ala	Ile	Leu	Met	Thr	Ile	Ala	Leu	Ala	Leu	Leu	Glu	
		355					360					365				
cag	cta	ccc	tgg	atg	tcc	tat	ctg	agc	atc	gtg	gcc	atc	ttt	ggc	ttt	1152
Gln	Leu	Pro	Trp	Met	Ser	Tyr	Leu	Ser	Ile	Val	Ala	Ile	Phe	Gly	Phe	
	370					375					380					
gtg	gcc	ttc	ttt	gaa	gtg	ggt	cct	ggc	ccc	atc	cca	tgg	ttc	atc	gtg	1200
Val	Ala	Phe	Phe	Glu	Val	Gly	Pro	Gly	Pro	Ile	Pro	Trp	Phe	Ile	Val	
385					390					395					400	
gct	gaa	ctc	ttc	agc	cag	ggt	cca	cgt	cca	gct	gcc	att	gcc	gtt	gca	1248
Ala	Glu	Leu	Phe	Ser	Gln	Gly	Pro	Arg	Pro	Ala	Ala	Ile	Ala	Val	Ala	
				405					410					415		
ggc	ttc	tcc	aac	tgg	acc	tca	aat	ttc	att	gtg	ggc	atg	tgc	ttc	cag	1296

FBRIC54.001APC_SeqList.txt

Gly	Phe	Ser	Asn	Trp	Thr	Ser	Asn	Phe	Ile	Val	Gly	Met	Cys	Phe	Gln		
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tat	gtg	gag	caa	ctg	tgt	ggg	ccc	tac	gtc	ttc	atc	atc	ttc	act	gtg		1344
Tyr	Val	Glu	Gln	Leu	Cys	Gly	Pro	Tyr	Val	Phe	Ile	Ile	Phe	Thr	Val		
		435					440					445					
ctc	ctg	gtt	ctg	ttc	ttc	atc	ttc	acc	tac	ttc	aaa	gtt	cct	gag	act		1392
Leu	Leu	Val	Leu	Phe	Phe	Ile	Phe	Thr	Tyr	Phe	Lys	Val	Pro	Glu	Thr		
	450					455					460						
aaa	ggc	cgg	acc	ttc	gat	gag	atc	gct	tcc	ggc	ttc	cgg	cag	ggg	gga		1440
Lys	Gly	Arg	Thr	Phe	Asp	Glu	Ile	Ala	Ser	Gly	Phe	Arg	Gln	Gly	Gly		
465					470					475					480		
gcc	agc	caa	agt	gat	aag	aca	ccc	gag	gag	ctg	ttc	cat	ccc	ctg	ggg		1488
Ala	Ser	Gln	Ser	Asp	Lys	Thr	Pro	Glu	Glu	Leu	Phe	His	Pro	Leu	Gly		
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gct	gat	tcc	caa	gtg	tga												1506
Ala	Asp	Ser	Gln	Val													
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Ile	Asn	Ala	Pro	Gln	Lys	Val	Ile	Glu	Glu	Phe	Tyr	Asn	Gln	Thr	Trp		
		35					40					45					
Val	His	Arg	Tyr	Gly	Glu	Ser	Ile	Tyr	Pro	Tyr	Asp	Val	Pro	Asp	Tyr		
	50					55					60						
Ala	Leu	Pro	Thr	Thr	Leu	Thr	Thr	Leu	Trp	Ser	Leu	Ser	Val	Ala	Ile		
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Phe	Ser	Val	Gly	Gly	Met	Ile	Gly	Ser	Phe	Ser	Val	Gly	Leu	Phe	Val		
			85						90					95			
Asn	Arg	Phe	Gly	Arg	Arg	Asn	Ser	Met	Leu	Met	Met	Asn	Leu	Leu	Ala		
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FBRIC54.001APC_SeqList.txt

Phe Val Ser Ala Val Leu Met Gly Phe Ser Lys Leu Gly Lys Ser Phe
115 120 125

Glu Met Leu Ile Leu Gly Arg Phe Ile Ile Gly Val Tyr Cys Gly Leu
130 135 140

Thr Thr Gly Phe Val Pro Met Tyr Val Gly Glu Val Ser Pro Thr Ala
145 150 155 160

Phe Arg Gly Ala Leu Gly Thr Leu His Gln Leu Gly Ile Val Val Gly
165 170 175

Ile Leu Ile Ala Gln Val Phe Gly Leu Asp Ser Ile Met Gly Asn Lys
180 185 190

Asp Leu Trp Pro Leu Leu Leu Ser Ile Ile Phe Ile Pro Ala Leu Leu
195 200 205

Gln Cys Ile Val Leu Pro Phe Cys Pro Glu Ser Pro Arg Phe Leu Leu
210 215 220

Ile Asn Arg Asn Glu Glu Asn Arg Ala Lys Ser Val Leu Lys Lys Leu
225 230 235 240

Arg Gly Thr Ala Asp Val Thr His Asp Leu Gln Glu Met Lys Glu Glu
245 250 255

Ser Arg Gln Met Met Arg Glu Lys Lys Val Thr Ile Leu Glu Leu Phe
260 265 270

Arg Ser Pro Ala Tyr Arg Gln Pro Ile Leu Ile Ala Val Val Leu Gln
275 280 285

Leu Ser Gln Gln Leu Ser Gly Ile Asn Ala Val Phe Tyr Tyr Ser Thr
290 295 300

Ser Ile Phe Glu Lys Ala Gly Val Gln Gln Pro Val Tyr Ala Thr Ile
305 310 315 320

Gly Ser Gly Ile Val Asn Thr Ala Phe Thr Val Val Ser Leu Phe Val
325 330 335

Val Glu Arg Ala Gly Arg Arg Thr Leu His Leu Ile Gly Leu Ala Gly
340 345 350

Met Ala Gly Cys Ala Ile Leu Met Thr Ile Ala Leu Ala Leu Leu Glu
355 360 365

FBRIC54.001APC_SeqList.txt

Gln Leu Pro Trp Met Ser Tyr Leu Ser Ile Val Ala Ile Phe Gly Phe
370 375 380

Val Ala Phe Phe Glu Val Gly Pro Gly Pro Ile Pro Trp Phe Ile Val
385 390 395 400

Ala Glu Leu Phe Ser Gln Gly Pro Arg Pro Ala Ala Ile Ala Val Ala
405 410 415

Gly Phe Ser Asn Trp Thr Ser Asn Phe Ile Val Gly Met Cys Phe Gln
420 425 430

Tyr Val Glu Gln Leu Cys Gly Pro Tyr Val Phe Ile Ile Phe Thr Val
435 440 445

Leu Leu Val Leu Phe Phe Ile Phe Thr Tyr Phe Lys Val Pro Glu Thr
450 455 460

Lys Gly Arg Thr Phe Asp Glu Ile Ala Ser Gly Phe Arg Gln Gly Gly
465 470 475 480

Ala Ser Gln Ser Asp Lys Thr Pro Glu Glu Leu Phe His Pro Leu Gly
485 490 495

Ala Asp Ser Gln Val
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<213> Artificial sequence

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<400> 14

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
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<210> 15
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<223> Simian Virus 5 epitope (SV5)

<400> 15

Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr
 1 5 10

<210> 16
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 <223> hexa-his

<400> 16

His His His His His His
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<210> 17
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 <212> PRT
 <213> Artificial sequence

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 <223> c-myc epitope

<400> 17

Phe Gln Lys Leu Ile Ser Glu Glu Asp Leu
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<210> 18
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 <213> Artificial sequence

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 <223> FLAG epitope

<400> 18

Asp Tyr Lys Asp Asp Asp Asp Lys Cys
 1 5

<210> 19
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 <213> Artificial sequence

<220>
 <223> Alternative FLAG epitope

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Met Asp Phe Lys Asp Asp Asp Asp Lys
 1 5

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FBRIC54.001APC_SeqList.txt

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<213> Artificial sequence

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<223> Alternative FLAG epitope

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Met Asp Tyr Lys Ala Phe Asp Asn Leu
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<210> 21

<211> 223

<212> PRT

<213> Artificial sequence

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<223> glutathione-S-transferase

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Met Ala Lys Leu Pro Ile Leu Gly Tyr Trp Lys Ile Lys Gly Leu Val
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Gln Pro Thr Arg Leu Leu Leu Glu Tyr Leu Glu Glu Lys Tyr Glu Glu
20 25 30

His Leu Tyr Glu Arg Asp Glu Gly Asp Lys Trp Arg Asn Lys Lys Phe
35 40 45

Glu Leu Gly Leu Glu Phe Pro Asn Leu Pro Tyr Tyr Ile Asp Gly Asp
50 55 60

Val Lys Leu Thr Gln Ser Met Ala Ile Ile Arg Tyr Ile Ala Asp Lys
65 70 75 80

His Asn Met Leu Gly Gly Cys Pro Lys Glu Arg Ala Glu Ile Ser Met
85 90 95

Leu Glu Gly Ala Val Leu Asp Ile Arg Tyr Gly Val Ser Arg Ile Ala
100 105 110

Tyr Ser Lys Asp Phe Glu Thr Leu Lys Val Asp Phe Leu Ser Lys Leu
115 120 125

Pro Glu Met Leu Lys Met Phe Glu Asp Arg Leu Cys His Lys Thr Tyr
130 135 140

Leu Asn Gly Asp His Val Thr His Pro Asp Phe Met Leu Tyr Asp Ala
145 150 155 160

FBRIC54.001APC_SeqList.txt

Leu Asp Val Val Leu Tyr Met Asp Pro Met Cys Leu Asp Ala Phe Pro
165 170 175

Lys Leu Val Cys Phe Lys Lys Arg Ile Glu Ala Ile Pro Gln Ile Asp
180 185 190

Lys Tyr Leu Lys Ser Ser Lys Tyr Ile Ala Trp Pro Leu Gln Gly Trp
195 200 205

Gln Ala Thr Phe Gly Gly Gly Asp His Pro Pro Lys Ser Asp Leu
210 215 220

<210> 22
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<212> PRT
<213> Artificial sequence

<220>
<223> Maltose binding protein
<400> 22

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Gly Tyr Asn Gly Leu Ala Glu Val Gly Lys Lys Phe Glu Lys Asp Thr
20 25 30

Gly Ile Lys Val Thr Val Glu His Pro Asp Lys Leu Glu Glu Lys Phe
35 40 45

Pro Gln Val Ala Ala Thr Gly Asp Gly Pro Asp Ile Ile Phe Trp Ala
50 55 60

His Asp Arg Phe Gly Gly Tyr Ala Gln Ser Gly Leu Leu Ala Glu Ile
65 70 75 80

Thr Pro Asp Lys Ala Phe Gln Asp Lys Leu Tyr Pro Phe Thr Trp Asp
85 90 95

Ala Val Arg Tyr Asn Gly Lys Leu Ile Ala Tyr Pro Ile Ala Val Glu
100 105 110

Ala Leu Ser Leu Ile Tyr Asn Lys Asp Leu Leu Pro Asn Pro Pro Lys
115 120 125

Thr Trp Glu Glu Ile Pro Ala Leu Asp Lys Glu Leu Lys Ala Lys Gly
130 135 140

FBRIC54.001APC_SeqList.txt

Lys Ser Ala Leu Met Phe Asn Leu Gln Glu Pro Tyr Phe Thr Trp Pro
145 150 155 160

Leu Ile Ala Ala Asp Gly Gly Tyr Ala Phe Lys Tyr Glu Asn Gly Lys
165 170 175

Tyr Asp Ile Lys Asp Val Gly Val Asp Asn Ala Gly Ala Lys Ala Gly
180 185 190

Leu Thr Phe Leu Val Asp Leu Ile Lys Asn Lys His Met Asn Ala Asp
195 200 205

Thr Asp Tyr Ser Ile Ala Glu Ala Ala Phe Asn Lys Gly Glu Thr Ala
210 215 220

Met Thr Ile Asn Gly Pro Trp Ala Trp Ser Asn Ile Asp Thr Ser Lys
225 230 235 240

Val Asn Tyr Gly Val Thr Val Leu Pro Thr Phe Lys Gly Gln Pro Ser
245 250 255

Lys Pro Phe Val Gly Val Leu Ser Ala Gly Ile Asn Ala Ala Ser Pro
260 265 270

Asn Lys Glu Leu Ala Lys Glu Phe Leu Glu Asn Tyr Leu Leu Thr Asp
275 280 285

Glu Gly Leu Glu Ala Val Asn Lys Asp Lys Pro Leu Gly Ala Val Ala
290 295 300

Leu Lys Ser Tyr Glu Glu Glu Leu Ala Lys Asp Pro Arg Ile Ala Ala
305 310 315 320

Thr Met Glu Asn Ala Gln Lys Gly Glu Ile Met Pro Asn Ile Pro Gln
325 330 335

Met Ser Ala Phe Trp Tyr Ala Val Arg Thr Ala Val Ile Asn Ala Ala
340 345 350

Ser Gly Arg Gln Thr Val Asp Glu Ala Leu Lys Asp Ala Gln Thr Asn
355 360 365

Ser Ser Ser Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Leu Gly Ile
370 375 380

Asp Thr Thr Glu Asn Leu Tyr Phe Gln Gly Ala Met Asp Pro Glu Phe
385 390 395 400

FBRIC54.001APC_SeqList.txt

Lys Gly Leu Arg Arg Arg Ala Gln Leu Val Arg Pro Leu Ser Asn Leu
405 410 415

Glu Pro Ala Val Ser Arg His Ala Val Pro Ser Leu Ala Leu Ala Val
420 425 430

Val Leu Gln Arg Arg Asp Trp Glu Asn Pro Gly Val Thr Gln Leu Asn
435 440 445

Arg Leu Ala Ala His Pro Pro Phe Ala Ser Trp Arg Asn Ser Glu Glu
450 455 460

Ala Arg Thr Asp Arg Pro Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu
465 470 475 480

Trp Gln Leu Gly Cys Phe Gly Gly
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<210> 23
<211> 168
<212> PRT
<213> Artificial sequence

<220>
<223> GAL4

<400> 23

Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu
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Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu
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Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro
35 40 45

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu
50 55 60

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile
65 70 75 80

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu
85 90 95

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala
100 105 110

FBRIC54.001APC_SeqList.txt

Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser
115 120 125

Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu
130 135 140

Thr Val Ser Pro Glu Phe Pro Gly Ile Arg Arg Leu Asp Ala Leu Ile
145 150 155 160

Ser Ser Arg Ala Ala Ala Gly Thr
165

<210> 24
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<212> PRT
<213> Artificial sequence

<220>
<223> Beta-galactosidase

<400> 24

Met Ser Phe Thr Leu Thr Asn Lys Asn Val Ile Phe Val Ala Gly Leu
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Gly Gly Ile Gly Leu Asp Thr Ser Lys Glu Leu Leu Lys Arg Asp Pro
20 25 30

Val Val Leu Gln Arg Arg Asp Trp Glu Asn Pro Gly Val Thr Gln Leu
35 40 45

Asn Arg Leu Ala Ala His Pro Pro Phe Ala Ser Trp Arg Asn Ser Glu
50 55 60

Glu Ala Arg Thr Asp Arg Pro Ser Gln Gln Leu Arg Ser Leu Asn Gly
65 70 75 80

Glu Trp Arg Phe Ala Trp Phe Pro Ala Pro Glu Ala Val Pro Glu Ser
85 90 95

Trp Leu Glu Cys Asp Leu Pro Glu Ala Asp Thr Val Val Val Pro Ser
100 105 110

Asn Trp Gln Met His Gly Tyr Asp Ala Pro Ile Tyr Thr Asn Val Thr
115 120 125

Tyr Pro Ile Thr Val Asn Pro Pro Phe Val Pro Thr Glu Asn Pro Thr
130 135 140

FBRIC54.001APC_SeqList.txt

Gly Cys Tyr Ser Leu Thr Phe Asn Val Asp Glu Ser Trp Leu Gln Glu
 145 150 155 160
 Gly Gln Thr Arg Ile Ile Phe Asp Gly Val Asn Ser Ala Phe His Leu
 165 170 175
 Trp Cys Asn Gly Arg Trp Val Gly Tyr Gly Gln Asp Ser Arg Leu Pro
 180 185 190
 Ser Glu Phe Asp Leu Ser Ala Phe Leu Arg Ala Gly Glu Asn Arg Leu
 195 200 205
 Ala Val Met Val Leu Arg Trp Ser Asp Gly Ser Tyr Leu Glu Asp Gln
 210 215 220
 Asp Met Trp Arg Met Ser Gly Ile Phe Arg Asp Val Ser Leu Leu His
 225 230 235 240
 Lys Pro Thr Thr Gln Ile Ser Asp Phe His Val Ala Thr Arg Phe Asn
 245 250 255
 Asp Asp Phe Ser Arg Ala Val Leu Glu Ala Glu Val Gln Met Cys Gly
 260 265 270
 Glu Leu Arg Asp Tyr Leu Arg Val Thr Val Ser Leu Trp Gln Gly Glu
 275 280 285
 Thr Gln Val Ala Ser Gly Thr Ala Pro Phe Gly Gly Glu Ile Ile Asp
 290 295 300
 Glu Arg Gly Gly Tyr Ala Asp Arg Val Thr Leu Arg Leu Asn Val Glu
 305 310 315 320
 Asn Pro Lys Leu Trp Ser Ala Glu Ile Pro Asn Leu Tyr Arg Ala Val
 325 330 335
 Val Glu Leu His Thr Ala Asp Gly Thr Leu Ile Glu Ala Glu Ala Cys
 340 345 350
 Asp Val Gly Phe Arg Glu Val Arg Ile Glu Asn Gly Leu Leu Leu Leu
 355 360 365
 Asn Gly Lys Pro Leu Leu Ile Arg Gly Val Asn Arg His Glu His His
 370 375 380

FBRIC54.001APC_SeqList.txt

Pro Leu His Gly Gln Val Met Asp Glu Gln Thr Met Val Gln Asp Ile
385 390 395 400

Leu Leu Met Lys Gln Asn Asn Phe Asn Ala Val Arg Cys Ser His Tyr
405 410 415

Pro Asn His Pro Leu Trp Tyr Thr Leu Cys Asp Arg Tyr Gly Leu Tyr
420 425 430

Val Val Asp Glu Ala Asn Ile Glu Thr His Gly Met Val Pro Met Asn
435 440 445

Arg Leu Thr Asp Asp Pro Arg Trp Leu Pro Ala Met Ser Glu Arg Val
450 455 460

Thr Arg Met Val Gln Arg Asp Arg Asn His Pro Ser Val Ile Ile Trp
465 470 475 480

Ser Leu Gly Asn Glu Ser Gly His Gly Ala Asn His Asp Ala Leu Tyr
485 490 495

Arg Trp Ile Lys Ser Val Asp Pro Ser Arg Pro Val Gln Tyr Glu Gly
500 505 510

Gly Gly Ala Asp Thr Thr Ala Thr Asp Ile Ile Cys Pro Met Tyr Ala
515 520 525

Arg Val Asp Glu Asp Gln Pro Phe Pro Ala Val Pro Lys Trp Ser Ile
530 535 540

Lys Lys Trp Leu Ser Leu Pro Gly Glu Thr Arg Pro Leu Ile Leu Cys
545 550 555 560

Glu Tyr Ala His Ala Met Gly Asn Ser Leu Gly Gly Phe Ala Lys Tyr
565 570 575

Trp Gln Ala Phe Arg Gln Tyr Pro Arg Leu Gln Gly Gly Phe Val Trp
580 585 590

Asp Trp Val Asp Gln Ser Leu Ile Lys Tyr Asp Glu Asn Gly Asn Pro
595 600 605

Trp Ser Ala Tyr Gly Gly Asp Phe Gly Asp Thr Pro Asn Asp Arg Gln
610 615 620

Phe Cys Met Asn Gly Leu Val Phe Ala Asp Arg Thr Pro His Pro Ala
625 630 635 640

FBRIC54.001APC_SeqList.txt

Leu Thr Glu Ala Lys His Gln Gln Gln Phe Phe Gln Phe Arg Leu Ser
 645 650 655
 Gly Gln Thr Ile Glu Val Thr Ser Glu Tyr Leu Phe Arg His Ser Asp
 660 665 670
 Asn Glu Leu Leu His Trp Met Val Ala Leu Asp Gly Lys Pro Leu Ala
 675 680 685
 Ser Gly Glu Val Pro Leu Asp Val Ala Pro Gln Gly Lys Gln Leu Ile
 690 695 700
 Glu Leu Pro Glu Leu Pro Gln Pro Glu Ser Ala Gly Gln Leu Trp Leu
 705 710 715 720
 Thr Val Arg Val Val Gln Pro Asn Ala Thr Ala Trp Ser Glu Ala Gly
 725 730 735
 His Ile Ser Ala Trp Gln Gln Trp Arg Leu Ala Glu Asn Leu Ser Val
 740 745 750
 Thr Leu Pro Ala Ala Ser His Ala Ile Pro His Leu Thr Thr Ser Glu
 755 760 765
 Met Asp Phe Cys Ile Glu Leu Gly Asn Lys Arg Trp Gln Phe Asn Arg
 770 775 780
 Gln Ser Gly Phe Leu Ser Gln Met Trp Ile Gly Asp Lys Lys Gln Leu
 785 790 795 800
 Leu Thr Pro Leu Arg Asp Gln Phe Thr Arg Ala Pro Leu Asp Asn Asp
 805 810 815
 Ile Gly Val Ser Glu Ala Thr Arg Ile Asp Pro Asn Ala Trp Val Glu
 820 825 830
 Arg Trp Lys Ala Ala Gly His Tyr Gln Ala Glu Ala Ala Leu Leu Gln
 835 840 845
 Cys Thr Ala Asp Thr Leu Ala Asp Ala Val Leu Ile Thr Thr Ala His
 850 855 860
 Ala Trp Gln His Gln Gly Lys Thr Leu Phe Ile Ser Arg Lys Thr Tyr
 865 870 875 880

FBRIC54.001APC_SeqList.txt

Arg Ile Asp Gly Ser Gly Gln Met Ala Ile Thr Val Asp Val Glu Val
885 890 895

Ala Ser Asp Thr Pro His Pro Ala Arg Ile Gly Leu Asn Cys Gln Leu
900 905 910

Ala Gln Val Ala Glu Arg Val Asn Trp Leu Gly Leu Gly Pro Gln Glu
915 920 925

Asn Tyr Pro Asp Arg Leu Thr Ala Ala Cys Phe Asp Arg Trp Asp Leu
930 935 940

Pro Leu Ser Asp Met Tyr Thr Pro Tyr Val Phe Pro Ser Glu Asn Gly
945 950 955 960

Leu Arg Cys Gly Thr Arg Glu Leu Asn Tyr Gly Pro His Gln Trp Arg
965 970 975

Gly Asp Phe Gln Phe Asn Ile Ser Arg Tyr Ser Gln Gln Gln Leu Met
980 985 990

Ser His Arg His Leu Leu His Ala Glu Glu Gly Thr Trp Leu Asn Ile
995 1000 1005

Asp Gly Phe His Met Gly Ile Gly Gly Asp Asp Ser Trp Ser Pro
1010 1015 1020

Ser Val Ser Ala Glu Leu Gln Leu Ser Ala Gly Arg Tyr His Tyr
1025 1030 1035

Gln Leu Val Trp Cys Gln Lys
1040 1045

<210> 25
<211> 238
<212> PRT
<213> Artificial sequence

<220>
<223> enhanced green fluorescence protein (eGFP)

<400> 25

Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
1 5 10 15

Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
20 25 30

FBRIC54.001APC_SeqList.txt

Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
35 40 45

Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe
50 55 60

Gly Tyr Gly Val Gln Cys Phe Ala Arg Tyr Pro Asp His Met Lys Gln
65 70 75 80

His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
85 90 95

Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
100 105 110

Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
115 120 125

Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
130 135 140

Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
145 150 155 160

Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
165 170 175

Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
180 185 190

Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
195 200 205

Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
210 215 220

Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
225 230 235

<210> 26
<211> 264
<212> PRT
<213> Artificial sequence

<220>
<223> yellow fluorescent protein

<400> 26

FBRIC54.001APC_SeqList.txt

Met Asp Gly Thr Glu Leu Gly Ser Thr Arg Asp Ser Arg Gly Ser Gly
1 5 10 15

Gly Ser Gly Gly Ser Gly Gly Ser Gly Met Val Ser Lys Gly Glu Glu
20 25 30

Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu Leu Asp Gly Asp Val
35 40 45

Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly Glu Gly Asp Ala Thr
50 55 60

Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr Thr Gly Lys Leu Pro
65 70 75 80

Val Pro Trp Pro Thr Leu Val Thr Thr Phe Gly Tyr Gly Leu Gln Cys
85 90 95

Phe Ala Arg Tyr Pro Asp His Met Lys Gln His Asp Phe Phe Lys Ser
100 105 110

Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr Ile Phe Phe Lys Asp
115 120 125

Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys Phe Glu Gly Asp Thr
130 135 140

Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp Phe Lys Glu Asp Gly
145 150 155 160

Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr Asn Ser His Asn Val
165 170 175

Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile Lys Val Asn Phe Lys
180 185 190

Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln Leu Ala Asp His Tyr
195 200 205

Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val Leu Leu Pro Asp Asn
210 215 220

His Tyr Leu Ser Tyr Gln Ser Ala Leu Ser Lys Asp Pro Asn Glu Lys
225 230 235 240

Arg Asp His Met Val Leu Leu Glu Phe Val Thr Ala Ala Gly Ile Thr
245 250 255

FBRIC54.001APC_SeqList.txt

Leu Gly Met Asp Glu Leu Tyr Lys
260

<210> 27

<211> 238

<212> PRT

<213> Artificial sequence

<220>

<223> soluble modified blue fluorescent protein

<400> 27

Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
1 5 10 15

Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
20 25 30

Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
35 40 45

Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe
50 55 60

Ser His Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Arg
65 70 75 80

His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
85 90 95

Thr Ile Ser Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
100 105 110

Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
115 120 125

Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
130 135 140

Tyr Asn Ser His Asn Val Tyr Ile Thr Ala Asp Lys Gln Lys Asn Gly
145 150 155 160

Ile Lys Ala Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
165 170 175

Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
180 185 190

FBRIC54.001APC_SeqList.txt

Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
195 200 205

Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
210 215 220

Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
225 230 235

<210> 28
<211> 238
<212> PRT
<213> Artificial sequence

<220>
<223> soluble-modified red-shifted green fluorescent protein
<400> 28

Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
1 5 10 15

Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
20 25 30

Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
35 40 45

Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe
50 55 60

Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Arg
65 70 75 80

His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
85 90 95

Thr Ile Ser Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
100 105 110

Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
115 120 125

Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
130 135 140

Tyr Asn Ser His Asn Val Tyr Ile Thr Ala Asp Lys Gln Lys Asn Gly
145 150 155 160

FBRIC54.001APC_SeqList.txt

Ile Lys Ala Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
165 170 175

Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
180 185 190

Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
195 200 205

Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
210 215 220

Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
225 230 235

<210> 29
<211> 262
<212> PRT
<213> Artificial sequence

<220>
<223> cyan fluorescent protein

<400> 29

Met His His His His His His His Asp Gly Thr Met Val Ser Lys Gly
1 5 10 15

Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu Leu Asp Gly
20 25 30

Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly Glu Gly Asp
35 40 45

Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr Thr Gly Lys
50 55 60

Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu Thr Trp Gly Val
65 70 75 80

Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln His Asp Phe Phe
85 90 95

Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr Ile Phe Phe
100 105 110

Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys Phe Glu Gly
115 120 125

FBRIC54.001APC_SeqList.txt

Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp Phe Lys Glu
130 135 140

Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr Ile Ser His
145 150 155 160

Asn Val Tyr Ile Thr Ala Asp Lys Gln Lys Asn Gly Ile Lys Ala Asn
165 170 175

Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln Leu Ala Asp
180 185 190

His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val Leu Leu Pro
195 200 205

Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys Asp Pro Asn
210 215 220

Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr Ala Ala Gly
225 230 235 240

Ile Thr Leu Gly Met Asp Glu Leu Tyr Ser Gly Ser Gly Ser Gly Ser
245 250 255

Leu Glu Gly Thr Glu Leu
260

<210> 30
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> streptavidin binding sequence

<400> 30

Trp Ser His Pro Gln Phe Glu Lys
1 5

<210> 31
<211> 574
<212> PRT
<213> Artificial sequence

<220>
<223> strepsolysin-O

<400> 31

FBRIC54.001APC_SeqList.txt

Met Lys Asp Met Ser Asn Lys Lys Thr Phe Lys Lys Tyr Ser Arg Val
1 5 10 15

Ala Gly Leu Leu Thr Ala Ala Leu Ile Ile Gly Asn Leu Val Thr Ala
20 25 30

Asn Ala Glu Ser Asn Lys Gln Asn Thr Ala Ser Thr Glu Thr Thr Thr
35 40 45

Thr Asn Glu Gln Pro Lys Pro Glu Ser Ser Glu Leu Thr Thr Glu Lys
50 55 60

Ala Gly Gln Lys Thr Asp Asp Met Leu Asn Ser Asn Asp Met Ile Lys
65 70 75 80

Leu Ala Pro Lys Glu Met Pro Leu Glu Ser Ala Glu Lys Glu Glu Lys
85 90 95

Lys Ser Glu Asp Lys Lys Lys Ser Glu Glu Asp His Thr Glu Glu Ile
100 105 110

Asn Asp Lys Ile Tyr Ser Leu Asn Tyr Asn Glu Leu Glu Val Leu Ala
115 120 125

Lys Asn Gly Glu Thr Ile Glu Asn Phe Val Pro Lys Glu Gly Val Lys
130 135 140

Lys Ala Asp Lys Phe Ile Val Ile Glu Arg Lys Lys Lys Asn Ile Asn
145 150 155 160

Thr Thr Pro Val Asp Ile Ser Ile Ile Asp Ser Val Thr Asp Arg Thr
165 170 175

Tyr Pro Ala Ala Leu Gln Leu Ala Asn Lys Gly Phe Thr Glu Asn Lys
180 185 190

Pro Asp Ala Val Val Thr Lys Arg Asn Pro Gln Lys Ile His Ile Asp
195 200 205

Leu Pro Gly Met Gly Asp Lys Ala Thr Val Glu Val Asn Asp Pro Thr
210 215 220

Tyr Ala Asn Val Ser Thr Ala Ile Asp Asn Leu Val Asn Gln Trp His
225 230 235 240

Asp Asn Tyr Ser Gly Gly Asn Thr Leu Pro Ala Arg Thr Gln Tyr Thr
245 250 255

FBRIC54.001APC_SeqList.txt

Glu Ser Met Val Tyr Ser Lys Ser Gln Ile Glu Ala Ala Leu Asn Val
 260 265 270
 Asn Ser Lys Ile Leu Asp Gly Thr Leu Gly Ile Asp Phe Lys Ser Ile
 275 280 285
 Ser Lys Gly Glu Lys Lys Val Met Ile Ala Ala Tyr Lys Gln Ile Phe
 290 295 300
 Tyr Thr Val Ser Ala Asn Leu Pro Asn Asn Pro Ala Asp Val Phe Asp
 305 310 315 320
 Lys Ser Val Thr Phe Lys Glu Leu Gln Arg Lys Gly Val Ser Asn Glu
 325 330 335
 Ala Pro Pro Leu Phe Val Ser Asn Val Ala Tyr Gly Arg Thr Val Phe
 340 345 350
 Val Lys Leu Glu Thr Ser Ser Lys Ser Asn Asp Val Glu Ala Ala Phe
 355 360 365
 Ser Ala Ala Leu Lys Gly Thr Asp Val Lys Thr Asn Gly Lys Tyr Ser
 370 375 380
 Asp Ile Leu Glu Asn Ser Ser Phe Thr Ala Val Val Leu Gly Gly Asp
 385 390 395 400
 Ala Ala Glu His Asn Lys Val Val Thr Lys Asp Phe Asp Val Ile Arg
 405 410 415
 Asn Val Ile Lys Asp Asn Ala Thr Phe Ser Arg Lys Asn Pro Ala Tyr
 420 425 430
 Pro Ile Ser Tyr Thr Ser Val Phe Leu Lys Asn Asn Lys Ile Ala Gly
 435 440 445
 Val Asn Asn Arg Thr Glu Tyr Val Glu Thr Thr Ser Thr Glu Tyr Thr
 450 455 460
 Ser Gly Lys Ile Asn Leu Ser His Arg Gly Ala Tyr Val Ala Gln Tyr
 465 470 475 480
 Glu Ile Leu Trp Asp Glu Ile Asn Tyr Asp Asp Lys Gly Lys Glu Val
 485 490 495

FBRIC54.001APC_SeqList.txt

Ile Thr Lys Arg Arg Trp Asp Asn Asn Trp Tyr Ser Lys Thr Ser Pro
500 505 510

Phe Ser Thr Val Ile Pro Leu Gly Ala Asn Ser Arg Asn Ile Arg Ile
515 520 525

Met Ala Arg Glu Cys Thr Gly Leu Ala Trp Glu Trp Trp Arg Lys Val
530 535 540

Ile Asp Glu Arg Asp Val Lys Leu Ser Lys Glu Ile Asn Val Asn Ile
545 550 555 560

Ser Gly Ser Thr Leu Ser Pro Tyr Gly Ser Ile Thr Tyr Lys
565 570

<210> 32
<211> 293
<212> PRT
<213> Artificial sequence

<220>
<223> alpha-hemolysin

<400> 32

Ala Asp Ser Asp Ile Asn Ile Lys Thr Gly Thr Thr Asp Ile Gly Ser
1 5 10 15

Asn Thr Thr Val Lys Thr Gly Asp Leu Val Thr Tyr Asp Lys Glu Asn
20 25 30

Gly Met His Lys Lys Val Phe Tyr Ser Phe Ile Asp Asp Lys Asn His
35 40 45

Asn Lys Lys Leu Leu Val Ile Arg Thr Lys Gly Thr Ile Ala Gly Gln
50 55 60

Tyr Arg Val Tyr Ser Glu Glu Gly Ala Asn Lys Ser Gly Leu Ala Trp
65 70 75 80

Pro Ser Ala Phe Lys Val Gln Leu Gln Leu Pro Asp Asn Glu Val Ala
85 90 95

Gln Ile Ser Asp Tyr Tyr Pro Arg Asn Ser Ile Asp Thr Lys Glu Tyr
100 105 110

Met Ser Thr Leu Thr Tyr Gly Phe Asn Gly Asn Val Thr Gly Asp Asp
115 120 125

FBRIC54.001APC_SeqList.txt

Thr Gly Lys Ile Gly Gly Leu Ile Gly Ala Asn Val Ser Ile Gly His
130 135 140

Thr Leu Lys Tyr Val Gln Pro Asp Phe Lys Thr Ile Leu Glu Ser Pro
145 150 155 160

Thr Asp Lys Lys Val Gly Trp Lys Val Ile Phe Asn Asn Met Val Asn
165 170 175

Gln Asn Trp Gly Pro Tyr Asp Arg Asp Ser Trp Asn Pro Val Tyr Gly
180 185 190

Asn Gln Leu Phe Met Lys Thr Arg Asn Gly Ser Met Lys Ala Ala Asp
195 200 205

Asn Phe Leu Asp Pro Asn Lys Ala Ser Ser Leu Leu Ser Ser Gly Phe
210 215 220

Ser Pro Asp Phe Ala Thr Val Ile Thr Met Asp Arg Lys Ala Ser Lys
225 230 235 240

Gln Gln Thr Asn Ile Asp Val Ile Tyr Glu Arg Val Arg Asp Asp Tyr
245 250 255

Gln Leu His Trp Thr Ser Thr Asn Trp Lys Gly Thr Asn Thr Lys Asp
260 265 270

Lys Trp Thr Asp Arg Ser Ser Glu Arg Tyr Lys Ile Asp Trp Glu Lys
275 280 285

Glu Glu Met Thr Asn
290

<210> 33
<211> 527
<212> PRT
<213> Artificial sequence

<220>
<223> tetanolysin-0

<400> 33

Met Asn Lys Asn Val Leu Lys Phe Val Ser Arg Ser Leu Leu Ile Phe
1 5 10 15

Ser Met Thr Gly Leu Ile Ser Asn Tyr Asn Ser Ser Asn Val Leu Ala
20 25 30

FBRIC54.001APC_SeqList.txt

Lys Gly Asn Val Glu Glu His Ser Leu Ile Asn Asn Gly Gln Val Val
 35 40 45
 Thr Ser Asn Thr Lys Cys Asn Leu Ala Lys Asp Asn Ser Ser Asp Ile
 50 55 60
 Asp Lys Asn Ile Tyr Gly Leu Ser Tyr Asp Pro Arg Lys Ile Leu Ser
 65 70 75 80
 Tyr Asn Gly Glu Gln Val Glu Asn Phe Val Pro Ala Glu Gly Phe Glu
 85 90 95
 Asn Pro Asp Lys Phe Ile Val Val Lys Arg Glu Lys Lys Ser Ile Ser
 100 105 110
 Asp Ser Thr Ala Asp Ile Ser Ile Ile Asp Ser Ile Asn Asp Arg Thr
 115 120 125
 Tyr Pro Gly Ala Ile Gln Leu Ala Asn Arg Asn Leu Met Glu Asn Lys
 130 135 140
 Pro Asp Ile Ile Ser Cys Glu Arg Lys Pro Ile Thr Ile Ser Val Asp
 145 150 155 160
 Leu Pro Gly Met Ala Glu Asp Gly Lys Lys Val Val Asn Ser Pro Thr
 165 170 175
 Tyr Ser Ser Val Asn Ser Ala Ile Asn Ser Ile Leu Asp Thr Trp Asn
 180 185 190
 Ser Lys Tyr Ser Ser Lys Tyr Thr Ile Pro Thr Arg Met Ser Tyr Ser
 195 200 205
 Asp Thr Met Val Tyr Ser Gln Ser Gln Leu Ser Ala Ala Val Gly Cys
 210 215 220
 Asn Phe Lys Ala Leu Asn Lys Ala Leu Asn Ile Asp Phe Asp Ser Ile
 225 230 235 240
 Phe Lys Gly Glu Lys Lys Val Met Leu Leu Ala Tyr Lys Gln Ile Phe
 245 250 255
 Tyr Thr Val Ser Val Asp Pro Pro Asn Arg Pro Ser Asp Leu Phe Gly
 260 265 270
 Asp Ser Val Thr Phe Asp Glu Leu Ala Leu Lys Gly Ile Asn Asn Asn
 275 280 285

FBRIC54.001APC_SeqList.txt

Asn Pro Pro Ala Tyr Val Ser Asn Val Ala Tyr Gly Arg Thr Ile Tyr
 290 295 300
 Val Lys Leu Glu Thr Thr Ser Lys Ser Ser His Val Lys Ala Ala Phe
 305 310 315 320
 Lys Ala Leu Ile Asn Asn Gln Asp Ile Ser Ser Asn Ala Glu Tyr Lys
 325 330 335
 Asp Ile Leu Asn Gln Ser Ser Phe Thr Ala Thr Val Leu Gly Gly Gly
 340 345 350
 Ala Gln Glu His Asn Lys Ile Ile Thr Lys Asp Phe Asp Glu Ile Arg
 355 360 365
 Asn Ile Ile Lys Asn Asn Ser Val Tyr Ser Pro Gln Asn Pro Gly Tyr
 370 375 380
 Pro Ile Ser Tyr Thr Thr Thr Phe Leu Lys Asp Asn Ser Ile Ala Ser
 385 390 395 400
 Val Asn Asn Lys Thr Glu Tyr Ile Glu Thr Thr Ala Thr Glu Tyr Thr
 405 410 415
 Asn Gly Lys Ile Val Leu Asp His Ser Gly Ala Tyr Val Ala Gln Phe
 420 425 430
 Gln Val Thr Trp Asp Glu Val Ser Tyr Asp Glu Lys Gly Asn Glu Ile
 435 440 445
 Val Glu His Lys Ala Trp Glu Gly Asn Asn Arg Asp Arg Thr Ala His
 450 455 460
 Phe Asn Thr Glu Ile Tyr Leu Lys Gly Asn Ala Arg Asn Ile Ser Val
 465 470 475 480
 Lys Ile Arg Glu Cys Thr Gly Leu Ala Trp Glu Trp Trp Arg Thr Ile
 485 490 495
 Val Asp Val Lys Asn Ile Pro Leu Ala Lys Glu Arg Thr Phe Tyr Ile
 500 505 510
 Trp Gly Thr Thr Leu Tyr Pro Lys Thr Ser Ile Glu Thr Lys Met
 515 520 525

FBRIC54.001APC_SeqList.txt

<210> 34
 <211> 6129
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (133)..(4575)

<400> 34
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 gcccgagaga cc atg cag agg tcg cct ctg gaa aag gcc agc gtt gtc tcc 171
 Met Gln Arg Ser Pro Leu Glu Lys Ala Ser Val Val Ser
 1 5 10
 aaa ctt ttt ttc agc tgg acc aga cca att ttg agg aaa gga tac aga 219
 Lys Leu Phe Phe Ser Trp Thr Arg Pro Ile Leu Arg Lys Gly Tyr Arg
 15 20 25
 cag cgc ctg gaa ttg tca gac ata tac caa atc cct tct gtt gat tct 267
 Gln Arg Leu Glu Leu Ser Asp Ile Tyr Gln Ile Pro Ser Val Asp Ser
 30 35 40 45
 gct gac aat cta tct gaa aaa ttg gaa aga gaa tgg gat aga gag ctg 315
 Ala Asp Asn Leu Ser Glu Lys Leu Glu Arg Glu Trp Asp Arg Glu Leu
 50 55 60
 gct tca aag aaa aat cct aaa ctc att aat gcc ctt cgg cga tgt ttt 363
 Ala Ser Lys Lys Asn Pro Lys Leu Ile Asn Ala Leu Arg Arg Cys Phe
 65 70 75
 ttc tgg aga ttt atg ttc tat gga atc ttt tta tat tta ggg gaa gtc 411
 Phe Trp Arg Phe Met Phe Tyr Gly Ile Phe Leu Tyr Leu Gly Glu Val
 80 85 90
 acc aaa gca gta cag cct ctc tta ctg gga aga atc ata gct tcc tat 459
 Thr Lys Ala Val Gln Pro Leu Leu Leu Gly Arg Ile Ile Ala Ser Tyr
 95 100 105
 gac ccg gat aac aag gag gaa cgc tct atc gcg att tat cta ggc ata 507
 Asp Pro Asp Asn Lys Glu Glu Arg Ser Ile Ala Ile Tyr Leu Gly Ile
 110 115 120 125
 ggc tta tgc ctt ctc ttt att gtg agg aca ctg ctc cta cac cca gcc 555
 Gly Leu Cys Leu Leu Phe Ile Val Arg Thr Leu Leu Leu His Pro Ala
 130 135 140
 att ttt ggc ctt cat cac att gga atg cag atg aga ata gct atg ttt 603
 Ile Phe Gly Leu His His Ile Gly Met Gln Met Arg Ile Ala Met Phe
 145 150 155
 agt ttg att tat aag aag act tta aag ctg tca agc cgt gtt cta gat 651
 Ser Leu Ile Tyr Lys Lys Thr Leu Lys Leu Ser Ser Arg Val Leu Asp
 160 165 170
 aaa ata agt att gga caa ctt gtt agt ctc ctt tcc aac aac ctg aac 699
 Lys Ile Ser Ile Gly Gln Leu Val Ser Leu Leu Ser Asn Asn Leu Asn
 175 180 185

FBRIC54.001APC_SeqList.txt

aaa Lys 190	ttt Phe	gat Asp	gaa Glu	gga Gly	ctt Leu 195	gca Ala	ttg Leu	gca Ala	cat His	ttc Phe 200	gtg Val	tggt Trp	atc Ile	gct Ala	cct Pro 205	747
ttg Leu	caa Gln	gtg Val	gca Ala	ctc Leu 210	ctc Leu	atg Met	ggg Gly	cta Leu	atc Ile 215	tggt Trp	gag Glu	ttg Leu	tta Leu	cag Gln 220	gcg Ala	795
tct Ser	gcc Ala	ttc Phe	tgt Cys 225	gga Gly	ctt Leu	ggt Gly	ttc Phe	ctg Leu 230	ata Ile	gtc Val	ctt Leu	gcc Ala	ctt Leu 235	ttt Phe	cag Gln	843
gct Ala	ggg Gly	cta Leu 240	ggg Gly	aga Arg	atg Met	atg Met	atg Met 245	aag Lys	tac Tyr	aga Arg	gat Asp	cag Gln 250	aga Arg	gct Ala	ggg Gly	891
aag Lys 255	atc Ile	agt Ser	gaa Glu	aga Arg	ctt Leu	gtg Val 260	att Ile	acc Thr	tca Ser	gaa Glu	atg Met 265	att Ile	gaa Glu	aat Asn	atc Ile	939
caa Gln 270	tct Ser	gtt Val	aag Lys	gca Ala	tac Tyr 275	tgc Cys	tggt Trp	gaa Glu	gaa Glu	gca Ala 280	atg Met	gaa Glu	aaa Lys	atg Met	att Ile 285	987
gaa Glu	aac Asn	tta Leu	aga Arg	caa Gln 290	aca Thr	gaa Glu	ctg Leu	aaa Lys 295	ctg Leu 295	act Thr	cgg Arg	aag Lys	gca Ala	gcc Ala 300	tat Tyr	1035
gtg Val	aga Arg	tac Tyr	ttc Phe 305	aat Asn	agc Ser	tca Ser	gcc Ala	ttc Phe 310	ttc Phe	ttc Phe	tca Ser	ggg Gly	ttc Phe 315	ttt Phe	gtg Val	1083
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cgg Arg 335	aaa Lys	ata Ile	ttc Phe	acc Thr	acc Thr	atc Ile 340	tca Ser	ttc Phe	tgc Cys	att Ile	gtt Val 345	ctg Leu	cgc Arg	atg Met	gcg Ala	1179
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aca Thr	gcc Ala 400	ttc Phe	tggt Trp	gag Glu	gag Glu	gga Gly	ttt Phe 405	ggg Gly	gaa Glu	tta Leu	ttt Phe	gag Glu 410	aaa Lys	gca Ala	aaa Lys	1371
caa Gln 415	aac Asn	aat Asn	aac Asn	aat Asn	aga Arg	aaa Lys 420	act Thr	tct Ser	aat Asn	ggt Gly	gat Asp 425	gac Asp	agc Ser	ctc Leu	ttc Phe	1419
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FBRIC54.001APC_SeqList.txt

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Thr	Ser	Gln	Gln	Leu	Lys	Gln	Leu	Glu	Ser	Glu	Gly	Arg	Ser	Pro		
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Page 63

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 Page 67

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Leu Phe Ile Thr Val Gly Ile Leu Val Ala Gln Ile Phe Gly Leu Arg
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Asn Leu Leu Ala Asn Val Asp Gly Trp Pro Ile Leu Leu Gly Leu Thr
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Gly Val Pro Ala Ala Leu Gln Leu Leu Leu Leu Pro Phe Phe Pro Glu
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Ser Pro Arg Tyr Leu Leu Ile Gln Lys Lys Asp Glu Ala Ala Ala Lys
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Lys Ala Leu Gln Thr Leu Arg Gly Trp Asp Ser Val Asp Arg Glu Val
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Ala Glu Ile Arg Gln Glu Asp Glu Ala Glu Lys Ala Ala Gly Phe Ile
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Ser Val Leu Lys Leu Phe Arg Met Arg Ser Leu Arg Trp Gln Leu Leu
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Ser Ile Ile Val Leu Met Gly Gly Gln Gln Leu Ser Gly Val Asn Ala
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Ile Tyr Tyr Tyr Ala Asp Gln Ile Tyr Leu Ser Ala Gly Val Pro Glu
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Glu His Val Gln Tyr Val Thr Ala Gly Thr Gly Ala Val Asn Val Val
325 330 335

Met Thr Phe Cys Ala Val Phe Val Val Glu Leu Leu Gly Arg Arg Leu
340 345 350

Leu Leu Leu Leu Gly Phe Ser Ile Cys Leu Ile Ala Cys Cys Val Leu
Page 82

355

Thr Ala Ala Leu Ala Leu Gln Asp Thr Val Ser Trp Met Pro Tyr Ile
370 375 380

Ser Ile Val Cys Val Ile Ser Tyr Val Ile Gly His Ala Leu Gly Pro
385 390 395 400

Ser Pro Ile Pro Ala Leu Leu Ile Thr Glu Ile Phe Leu Gln Ser Ser
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Arg Pro Ser Ala Phe Met Val Gly Gly Ser Val His Trp Leu Ser Asn
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Phe Thr Val Gly Leu Ile Phe Pro Phe Ile Gln Glu Gly Leu Gly Pro
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Tyr Ser Phe Ile Val Phe Ala Val Ile Cys Leu Leu Thr Thr Ile Tyr
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Ile Phe Leu Ile Val Pro Glu Thr Lys Ala Lys Thr Phe Ile Glu Ile
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FBRIC54.001APC_SeqList.txt

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Ala Val Phe Gly Ser Leu Ser Leu Tyr Ala Leu Gly Leu Leu Leu Pro
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Trp Arg Trp Leu Ala Val Ala Gly Glu Ala Pro Val Leu Ile Met Ile
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 Asn Leu Thr Leu Gly Leu Tyr Ile His Phe Gly Pro Arg Pro Leu Ser
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 Pro Asn Ser Thr Ala Gly Leu Glu Ser Glu Ser Trp Gly Asp Leu Ala
 370 375 380
 Gln Pro Leu Ala Ala Pro Ala Gly Tyr Leu Thr Leu Val Pro Leu Leu
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 Thr Trp Leu Leu Met Ser Glu Val Leu Pro Leu Arg Ala Arg Gly Val
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 Ala Ser Gly Leu Cys Val Leu Ala Ser Trp Leu Thr Ala Phe Val Leu
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FBRIC54.001APC_SeqList.txt

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Lys	Ser	Phe	Tyr	Asn	Glu	Thr	Tyr	Phe	Glu	Arg	His	Ala	Thr	Phe	Met	
65					70					75					80	
Asp	Gly	Lys	Leu	Met	Leu	Leu	Leu	Trp	Ser	Cys	Thr	Val	Ser	Met	Phe	
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Pro	Leu	Gly	Gly	Leu	Leu	Gly	Ser	Leu	Leu	Val	Gly	Leu	Leu	Val	Asp	
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FBRIC54.001APC_SeqList.txt

Ser Cys Gly Arg Lys Gly Thr Leu Leu Ile Asn Asn Ile Phe Ala Ile
115 120 125

Ile Pro Ala Ile Leu Met Gly Val Ser Lys Val Ala Lys Ala Phe Glu
130 135 140

Leu Ile Val Phe Ser Arg Val Val Leu Gly Val Cys Ala Gly Ile Ser
145 150 155 160

Tyr Ser Ala Leu Pro Met Tyr Leu Gly Glu Leu Ala Pro Lys Asn Leu
165 170 175

Arg Gly Met Val Gly Thr Met Thr Glu Val Phe Val Ile Val Gly Val
180 185 190

Phe Leu Ala Gln Ile Phe Ser Leu Gln Ala Ile Leu Gly Asn Pro Ala
195 200 205

Gly Trp Pro Val Leu Leu Ala Leu Thr Gly Val Pro Ala Leu Leu Gln
210 215 220

Leu Leu Thr Leu Pro Phe Phe Pro Glu Ser Pro Arg Tyr Ser Leu Ile
225 230 235 240

Gln Lys Gly Asp Glu Ala Thr Ala Arg Gln Ala Leu Arg Arg Leu Arg
245 250 255

Gly His Thr Asp Met Glu Ala Glu Leu Glu Asp Met Arg Ala Glu Ala
260 265 270

Arg Ala Glu Arg Ala Glu Gly His Leu Ser Val Leu His Leu Cys Ala
275 280 285

Leu Arg Ser Leu Arg Trp Gln Leu Leu Ser Ile Ile Val Leu Met Ala
290 295 300

Gly Gln Gln Leu Ser Gly Ile Asn Ala Ile Asn Tyr Tyr Ala Asp Thr
305 310 315 320

Ile Tyr Thr Ser Ala Gly Val Glu Ala Ala His Ser Gln Tyr Val Thr
325 330 335

Val Gly Ser Gly Val Val Asn Ile Val Met Thr Ile Thr Ser Ala Val
340 345 350

Leu Val Glu Arg Leu Gly Arg Arg His Leu Leu Leu Ala Gly Tyr Gly

355

Ile Cys Gly Ser Ala Cys Leu Val Leu Thr Val Val Leu Leu Phe Gln
370 375 380

Asn Arg Val Pro Glu Leu Ser Tyr Leu Gly Ile Ile Cys Val Phe Ala
385 390 395 400

Tyr Ile Ala Gly His Ser Ile Gly Pro Ser Pro Val Pro Ser Val Val
405 410 415

Arg Thr Glu Ile Phe Leu Gln Ser Ser Arg Arg Ala Ala Phe Met Val
420 425 430

Asp Gly Ala Val His Trp Leu Thr Asn Phe Ile Ile Gly Phe Leu Phe
435 440 445

Pro Ser Ile Gln Glu Ala Ile Gly Ala Tyr Ser Phe Ile Ile Phe Ala
450 455 460

Gly Ile Cys Leu Leu Thr Ala Ile Tyr Ile Tyr Val Val Ile Pro Glu
465 470 475 480

Thr Lys Gly Lys Thr Phe Val Glu Ile Asn Arg Ile Phe Ala Lys Arg
485 490 495

Asn Arg Val Lys Leu Pro Glu Glu Lys Glu Glu Thr Ile Asp Ala Gly
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Pro Pro Thr Ala Ser Pro Ala Lys Glu Thr Ser Phe
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53

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Gln Pro Leu Leu Gly Pro Pro Gly Gly Ser Ala Pro Arg Gly Arg Arg
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101

FBRIC54.001APC_SeqList.txt

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Phe	Ala	Leu	Gly	Tyr	Ser	Ser	Pro	Ala	Ile	Pro	Ser	Leu	Gln	Arg	Ala	
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Ala	Pro	Pro	Ala	Pro	Arg	Leu	Asp	Asp	Ala	Ala	Ala	Ser	Trp	Phe	Gly	
		60					65					70				
gct	gtc	gtg	acc	ctg	ggt	gcc	gcg	gcg	ggg	gga	gtg	ctg	ggc	ggc	tgg	293
Ala	Val	Val	Thr	Leu	Gly	Ala	Ala	Ala	Gly	Gly	Val	Leu	Gly	Gly	Trp	
	75					80					85					
ctg	gtg	gac	cgc	gcc	ggg	cgc	aag	ctg	agc	ctc	ttg	ctg	tgc	tcc	gtg	341
Leu	Val	Asp	Arg	Ala	Gly	Arg	Lys	Leu	Ser	Leu	Leu	Leu	Cys	Ser	Val	
90					95					100					105	
ccc	ttc	gtg	gcc	ggc	ttt	gcc	gtc	atc	acc	gcg	gcc	cag	gac	gtg	tgg	389
Pro	Phe	Val	Ala	Gly	Phe	Ala	Val	Ile	Thr	Ala	Ala	Gln	Asp	Val	Trp	
				110					115					120		
atg	ctg	ctg	ggg	ggc	cgc	ctc	ctc	acc	ggc	ctg	gcc	tgc	ggt	ggt	gcc	437
Met	Leu	Leu	Gly	Gly	Arg	Leu	Leu	Thr	Gly	Leu	Ala	Cys	Gly	Val	Ala	
			125					130					135			
tcc	cta	gtg	gcc	ccg	gtc	tac	atc	tcc	gaa	atc	gcc	tac	cca	gca	gtc	485
Ser	Leu	Val	Ala	Pro	Val	Tyr	Ile	Ser	Glu	Ile	Ala	Tyr	Pro	Ala	Val	
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cgg	ggg	ttg	ctc	ggc	tcc	tgt	gtg	cag	cta	atg	gtc	gtc	gtc	ggc	atc	533
Arg	Gly	Leu	Leu	Gly	Ser	Cys	Val	Gln	Leu	Met	Val	Val	Val	Gly	Ile	
	155					160					165					
ctc	ctg	gcc	tac	ctg	gca	ggc	tgg	gtg	ctg	gag	tgg	cgc	tgg	ctg	gct	581
Leu	Leu	Ala	Tyr	Leu	Ala	Gly	Trp	Val	Leu	Glu	Trp	Arg	Trp	Leu	Ala	
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Val	Leu	Gly	Cys	Val	Pro	Pro	Ser	Leu	Met	Leu	Leu	Leu	Met	Cys	Phe	
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atg	ccc	gag	acc	ccg	cgc	ttc	ctg	ctg	act	cag	cac	agg	cgc	cag	gag	677
Met	Pro	Glu	Thr	Pro	Arg	Phe	Leu	Leu	Thr	Gln	His	Arg	Arg	Gln	Glu	
			205					210					215			
gcc	atg	gcc	gcc	ctg	cgg	ttc	ctg	tgg	ggc	tcc	gag	cag	ggc	tgg	gaa	725
Ala	Met	Ala	Ala	Leu	Arg	Phe	Leu	Trp	Gly	Ser	Glu	Gln	Gly	Trp	Glu	
		220					225					230				
gac	ccc	ccc	atc	ggg	gct	gag	cag	agc	ttt	cac	ctg	gcc	ctg	ctg	cgg	773
Asp	Pro	Pro	Ile	Gly	Ala	Glu	Gln	Ser	Phe	His	Leu	Ala	Leu	Leu	Arg	
	235					240					245					
cag	ccc	ggc	atc	tac	aag	ccc	ttc	atc	atc	ggc	gtc	tcc	ctg	atg	gcc	821
Gln	Pro	Gly	Ile	Tyr	Lys	Pro	Phe	Ile	Ile	Gly	Val	Ser	Leu	Met	Ala	
250					255					260					265	
ttc	cag	cag	ctg	tcg	ggg	gtc	aac	gcc	gtc	atg	ttc	tat	gca	gag	acc	869
Phe	Gln	Gln	Leu	Ser	Gly	Val	Asn	Ala	Val	Met	Phe	Tyr	Ala	Glu	Thr	

FBRIC54.001APC_SeqList.txt

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gtg ggt gtc atc cag gtg ctg ttc aca gct gtg gcg gct ctc atc atg Val Gly 300 Val Ile Gln Val Leu 305 Phe Thr Ala Val Ala 310 Ala Leu Ile Met			965
gac aga gca ggg cgg agg ctg ctc ctg gtc ttg tca ggt gtg gtc atg Asp Arg 315 Ala Gly Arg Arg Leu 320 Leu Val Leu Ser 325 Gly Val Val Met			1013
gtg ttc agc acg agt gcc ttc ggc gcc tac ttc aag ctg acc cag ggt Val Phe Ser Thr Ser 335 Ala Phe Gly Ala Tyr Phe 340 Lys Leu Thr Gln Gly 345			1061
ggc cct ggc aac tcc tcg cac gtg gcc atc tcg gcg cct gtc tct gca Gly Pro Gly Asn 350 Ser Ser His Val Ala 355 Ile Ser Ala Pro Val Ser Ala 360			1109
cag cct gtt gat gcc agc gtg ggg ctg gcc tgg ctg gcc gtg ggc agc Gln Pro Val Asp 365 Ala Ser Val Gly 370 Leu Ala Trp Leu Ala Val Gly Ser 375			1157
atg tgc ctc ttc atc gcc ggc ttt gcg gtg ggc tgg ggg ccc atc ccc Met Cys 380 Leu Phe Ile Ala Gly 385 Phe Ala Val Gly Trp 390 Gly Pro Ile Pro			1205
tgg ctc ctc atg tca gag atc ttc cct ctg cat gtc aag ggc gtg gcg Trp 395 Leu Leu Met Ser Glu 400 Ile Phe Pro Leu His Val Lys Gly Val Ala 405			1253
aca ggc atc tgc gtc ctc acc aac tgg ctc atg gcc ttt ctc gtg acc Thr Gly Ile Cys Val 415 Leu Thr Asn Trp Leu Met Ala Phe Leu Val Thr 425			1301
aag gag ttc agc agc ctc atg gag gtc ctc agg ccc tat gga gcc ttc Lys Glu Phe Ser 430 Leu Met Glu Val 435 Leu Arg Pro Tyr Gly Ala Phe 440			1349
tgg ctt gcc tcc gct ttc tgc atc ttc agt gtc ctt ttc act ttt tcc Trp Leu Ala Ser 445 Ala Phe Cys Ile Phe 450 Ser Val Leu Phe Thr 455 Phe Ser			1397
tgt gtc cct gaa act aaa gga aag act ctg gaa caa atc aca gcc cat Cys Val Pro Glu Thr Lys Gly 465 Lys Thr Leu Glu Gln Ile Thr Ala His 470			1445
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FBRIC54.001APC_SeqList.txt

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35 40 45

Pro Ala Ile Pro Ser Leu Gln Arg Ala Ala Pro Pro Ala Pro Arg Leu
50 55 60

Asp Asp Ala Ala Ala Ser Trp Phe Gly Ala Val Val Thr Leu Gly Ala
65 70 75 80

Ala Ala Gly Gly Val Leu Gly Gly Trp Leu Val Asp Arg Ala Gly Arg
85 90 95

Lys Leu Ser Leu Leu Leu Cys Ser Val Pro Phe Val Ala Gly Phe Ala
100 105 110

Val Ile Thr Ala Ala Gln Asp Val Trp Met Leu Leu Gly Gly Arg Leu
115 120 125

Leu Thr Gly Leu Ala Cys Gly Val Ala Ser Leu Val Ala Pro Val Tyr
130 135 140

Ile Ser Glu Ile Ala Tyr Pro Ala Val Arg Gly Leu Leu Gly Ser Cys
145 150 155 160

Val Gln Leu Met Val Val Val Gly Ile Leu Leu Ala Tyr Leu Ala Gly
165 170 175

Trp Val Leu Glu Trp Arg Trp Leu Ala Val Leu Gly Cys Val Pro Pro
180 185 190

Ser Leu Met Leu Leu Leu Met Cys Phe Met Pro Glu Thr Pro Arg Phe
195 200 205

Leu Leu Thr Gln His Arg Arg Gln Glu Ala Met Ala Ala Leu Arg Phe
210 215 220

Leu Trp Gly Ser Glu Gln Gly Trp Glu Asp Pro Pro Ile Gly Ala Glu
225 230 235 240

FBRIC54.001APC_SeqList.txt

Gln Ser Phe His Leu Ala Leu Leu Arg Gln Pro Gly Ile Tyr Lys Pro
245 250 255

Phe Ile Ile Gly Val Ser Leu Met Ala Phe Gln Gln Leu Ser Gly Val
260 265 270

Asn Ala Val Met Phe Tyr Ala Glu Thr Ile Phe Glu Glu Ala Lys Phe
275 280 285

Lys Asp Ser Ser Leu Ala Ser Val Val Val Gly Val Ile Gln Val Leu
290 295 300

Phe Thr Ala Val Ala Ala Leu Ile Met Asp Arg Ala Gly Arg Arg Leu
305 310 315 320

Leu Leu Val Leu Ser Gly Val Val Met Val Phe Ser Thr Ser Ala Phe
325 330 335

Gly Ala Tyr Phe Lys Leu Thr Gln Gly Gly Pro Gly Asn Ser Ser His
340 345 350

Val Ala Ile Ser Ala Pro Val Ser Ala Gln Pro Val Asp Ala Ser Val
355 360 365

Gly Leu Ala Trp Leu Ala Val Gly Ser Met Cys Leu Phe Ile Ala Gly
370 375 380

Phe Ala Val Gly Trp Gly Pro Ile Pro Trp Leu Leu Met Ser Glu Ile
385 390 395 400

Phe Pro Leu His Val Lys Gly Val Ala Thr Gly Ile Cys Val Leu Thr
405 410 415

Asn Trp Leu Met Ala Phe Leu Val Thr Lys Glu Phe Ser Ser Leu Met
420 425 430

Glu Val Leu Arg Pro Tyr Gly Ala Phe Trp Leu Ala Ser Ala Phe Cys
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ctg gag tgt gac cac ctg agg agt ggg gtg cca ggt gga agg aga aga Leu Glu Cys Asp His Leu Arg Ser Gly Val Pro Gly Gly Arg Arg Arg 35 40 45		201
aag gac tgg tcc tgc tgc ctc ctc gtg gcc tcc ctc gcg ggc gcc ttc Lys Asp Trp Ser Cys Ser Leu Leu Val Ala Ser Leu Ala Gly Ala Phe 50 55 60 65		249
ggc tcc tcc ttc ctc tac ggc tac aac ctg tgc gtg gtg aat gcc ccc Gly Ser Ser Phe Leu Tyr Gly Tyr Asn Leu Ser Val Val Asn Ala Pro 70 75 80		297
acc ccg tac atc aag gcc ttt tac aat gag tca tgg gaa aga agg cat Thr Pro Tyr Ile Lys Ala Phe Tyr Asn Glu Ser Trp Glu Arg Arg His 85 90 95		345
gga cgt cca ata gac cca gac act ctg act ctg ctc tgg tct gtg act Gly Arg Pro Ile Asp Pro Asp Thr Leu Thr Leu Leu Trp Ser Val Thr 100 105 110		393
gtg tcc ata ttc gcc atc ggt gga ctt gtg ggg aca tta att gtg aag Val Ser Ile Phe Ala Ile Gly Gly Leu Val Gly Thr Leu Ile Val Lys 115 120 125		441
atg att gga aag gtt ctt ggg agg aag cac act ttg ctg gcc aat aat Met Ile Gly Lys Val Leu Gly Arg Lys His Thr Leu Leu Ala Asn Asn 130 135 140 145		489
ggg ttt gca att tct gct gca ttg ctg atg gcc tgc tgc ctc cag gca Gly Phe Ala Ile Ser Ala Ala Leu Leu Met Ala Cys Ser Leu Gln Ala 150 155 160		537
gga gcc ttt gaa atg ctc atc gtg gga cgc ttc atc atg ggc ata gat Gly Ala Phe Glu Met Leu Ile Val Gly Arg Phe Ile Met Gly Ile Asp 165 170 175		585
gga ggc gtc gcc ctc agt gtg ctc ccc atg tac ctc agt gag atc tca Gly Gly Val Ala Leu Ser Val Leu Pro Met Tyr Leu Ser Glu Ile Ser 180 185 190		633
ccc aag gag atc cgt ggc tct ctg ggg cag gtg act gcc atc ttt atc		681

FBRIC54.001APC_SeqList.txt

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Cys	Ile	Gly	Val	Phe	Thr	Gly	Gln	Leu	Leu	Gly	Leu	Pro	Glu	Leu	Leu	225	
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Tyr	Leu	Leu	Leu	Glu	Lys	His	Asn	Glu	Ala	Arg	Ala	Val	Lys	Ala	Phe	270	
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Leu	Ala	Glu	Ser	Arg	Val	Gln	Arg	Ser	Ile	Arg	Leu	Val	Ser	Val	Leu	305	
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Glu	Leu	Leu	Arg	Ala	Pro	Tyr	Val	Arg	Trp	Gln	Val	Val	Thr	Val	Ile	315	
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ctg	acc	ctg	cag	gac	cac	gcc	ccc	tgg	gtc	ccc	tac	ctg	agt	atc	gtg	1305	
Leu	Thr	Leu	Gln	Asp	His	Ala	Pro	Trp	Val	Pro	Tyr	Leu	Ser	Ile	Val	410	
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ggc	att	ctg	gcc	atc	atc	gcc	tct	ttc	tgc	agt	ggg	cca	ggt	ggc	atc	1353	
Gly	Ile	Leu	Ala	Ile	Ile	Ala	Ser	Phe	Cys	Ser	Gly	Pro	Gly	Gly	Ile	420	
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FBRIC54.001APC_SeqList.txt

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ggg ctc ctc ttc cca ttc att cag aaa agt ctg gac acc tac tgt ttc	1497
Gly Leu Leu Phe Pro Phe Ile Gln Lys Ser Leu Asp Thr Tyr Cys Phe	
470 475 480	
cta gtc ttt gct aca att tgt atc aca ggt gct atc tac ctg tat ttt	1545
Leu Val Phe Ala Thr Ile Cys Ile Thr Gly Ala Ile Tyr Leu Tyr Phe	
485 490 495	
gtg ctg cct gag acc aaa aac aga acc tat gca gaa atc agc cag gca	1593
Val Leu Pro Glu Thr Lys Asn Arg Thr Tyr Ala Glu Ile Ser Gln Ala	
500 505 510	
ttt tcc aaa agg aac aaa gca tac cca cca gaa gag aaa atc gac tca	1641
Phe Ser Lys Arg Asn Lys Ala Tyr Pro Pro Glu Glu Lys Ile Asp Ser	
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gct gtc act gat ggt aag ata aat gga agg cct taa caagtttcct	1687
Ala Val Thr Asp Gly Lys Ile Asn Gly Arg Pro	
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aggaaactta aaatttaccc attattggga agcttaaattg aattgaagct atgcaagtct	1807
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<400> 50

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 35 40 45

Arg Lys Asp Trp Ser Cys Ser Leu Leu Val Ala Ser Leu Ala Gly Ala
 50 55 60

Phe Gly Ser Ser Phe Leu Tyr Gly Tyr Asn Leu Ser Val Val Asn Ala
 65 70 75 80

Pro Thr Pro Tyr Ile Lys Ala Phe Tyr Asn Glu Ser Trp Glu Arg Arg
 85 90 95

FBRIC54.001APC_SeqList.txt

His Gly Arg Pro Ile Asp Pro Asp Thr Leu Thr Leu Leu Trp Ser Val
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Thr Val Ser Ile Phe Ala Ile Gly Gly Leu Val Gly Thr Leu Ile Val
115 120 125

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130 135 140

Asn Gly Phe Ala Ile Ser Ala Ala Leu Leu Met Ala Cys Ser Leu Gln
145 150 155 160

Ala Gly Ala Phe Glu Met Leu Ile Val Gly Arg Phe Ile Met Gly Ile
165 170 175

Asp Gly Gly Val Ala Leu Ser Val Leu Pro Met Tyr Leu Ser Glu Ile
180 185 190

Ser Pro Lys Glu Ile Arg Gly Ser Leu Gly Gln Val Thr Ala Ile Phe
195 200 205

Ile Cys Ile Gly Val Phe Thr Gly Gln Leu Leu Gly Leu Pro Glu Leu
210 215 220

Leu Gly Lys Glu Ser Thr Trp Pro Tyr Leu Phe Gly Val Ile Val Val
225 230 235 240

Pro Ala Val Val Gln Leu Leu Ser Leu Pro Phe Leu Pro Asp Ser Pro
245 250 255

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275 280 285

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290 295 300

Leu Glu Leu Leu Arg Ala Pro Tyr Val Arg Trp Gln Val Val Thr Val
305 310 315 320

Ile Val Thr Met Ala Cys Tyr Gln Leu Cys Gly Leu Asn Ala Ile Trp
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Phe Tyr Thr Asn Ser Ile Phe Gly Lys Ala Gly Ile Pro Leu Ala Lys

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340

345

350

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Gly Leu Thr Phe Gly Tyr Glu Leu Ala Val Ile Ser Gly Ala Leu Leu
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Pro Leu Gln Leu Asp Phe Gly Leu Ser Cys Leu Glu Gln Glu Phe Leu
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Ser Ser Met Ala Cys Cys Ile Tyr Val Ser Glu Leu Val Gly Pro Arg
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135 140 145

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Ile Leu Leu Ser Tyr Ala Leu Asn Tyr Ala Leu Ala Gly Thr Pro Trp
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370 375 380

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405 410 415

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Ser Phe Leu Asp Leu Ile Gly Thr Ile Gly Leu Ser Trp Thr Phe Leu
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Trp	Glu	Leu	Phe	Gln	His	Arg	Ala	Leu	Arg	Arg	Gln	Val	Thr	Ser	Leu	
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FBRIC54.001APC_SeqList.txt

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Thr Trp Gln Ala Arg Thr Gly Glu Pro Leu Pro Asp His Leu Val Leu 50 55 60	
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Gly Ala Leu Leu Ala Gly Pro Leu Ala Ile Thr Leu Gly Arg Lys Lys 85 90 95	
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Gly Phe Ser Arg Lys Ala Gly Ser Phe Glu Met Ile Met Leu Gly Arg 115 120 125	
Leu Leu Val Gly Val Asn Ala Gly Val Ser Met Asn Ile Gln Pro Met 130 135 140	
Tyr Leu Gly Glu Ser Ala Pro Lys Glu Leu Arg Gly Ala Val Ala Met 145 150 155 160	

FBRIC54.001APC_SeqList.txt

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195 200 205

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Gly Glu Leu Glu Glu Leu Glu Glu Glu Arg Ala Ala Cys Gln Gly Cys
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355 360 365

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FBRIC54.001APC_SeqList.txt

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gca Ala 565	aaa Lys	gtg Val	aac Asn	tat Tyr	gtg Val 570	aaa Lys	aac Asn	aac Asn	att Ile	tgt Cys 575	ttt Phe	atg Met	agt Ser	cat His	cac His 580	1845
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FBRIC54.001APC_SeqList.txt

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Phe His Gly Trp Lys Tyr Met Phe Gly Leu Val Ile Pro Leu Gly Val
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290 295 300

Leu Lys Ser Val Gly Phe Gln Ser Asn Glu Ala Ala Ser Leu Ala Ser
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325 330 335

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His Met Asn Phe Thr His Ile Cys Arg Ser His Asn Ser Ile Asn Gln
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FBRIC54.001APC_SeqList.txt

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Leu Ile Ser Leu Thr Phe Leu Thr Val Thr Asp Leu Ile Gly Leu Pro
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Ile Leu Leu Ala Ser Ala Leu Phe Thr Ala Gly Ser Ala Val Leu Ala
135 140 145

gcg gcc aac aac aag gag aca ctg ctc gcc ggc cgc ctg gtc gtg gga 597
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165 170 175

gtc tca cca ccc aat tta aga ggc cga tta gtc acc att aat acc ctc 693
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Page 118

FBRIC54.001APC_SeqList.txt

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atgtcacata ttattattta attgtacttg tcttttttta cttaagagc ataaactcgt 3178
ttttattttg cacacttttc tcatttttct gagaatttac cagaaaaaaa aagatacata 3238
gattgtctc tgtgtttttc tta 3261

<210> 58
<211> 629
<212> PRT
<213> Artificial sequence

<220>
<221> misc_feature
<222> (227)..(227)
<223> The 'Xaa' at location 227 stands for Ala, or Thr.

<220>
<221> misc_feature
<222> (436)..(436)
<223> The 'Xaa' at location 436 stands for Tyr, or Phe.

<220>
<223> Synthetic Construct

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1 5 10 15

Ala Gly Glu Cys Ser Leu Leu Ala Ala Ala Glu Ser Ser Thr Ser Leu
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Gln Ser Ala Gly Ala Gly Gly Gly Gly Val Gly Asp Leu Glu Arg Ala

35

40

45

Ala Arg Arg Gln Phe Gln Gln Asp Glu Thr Pro Ala Phe Val Tyr Val
 50 55 60

Val Ala Val Phe Ser Ala Leu Gly Gly Phe Leu Phe Gly Tyr Asp Thr
 65 70 75 80

Gly Val Val Ser Gly Ala Met Leu Leu Leu Lys Arg Gln Leu Ser Leu
 85 90 95

Asp Ala Leu Trp Gln Glu Leu Leu Val Ser Ser Thr Val Gly Ala Ala
 100 105 110

Ala Val Ser Ala Leu Ala Gly Gly Ala Leu Asn Gly Val Phe Gly Arg
 115 120 125

Arg Ala Ala Ile Leu Leu Ala Ser Ala Leu Phe Thr Ala Gly Ser Ala
 130 135 140

Val Leu Ala Ala Ala Asn Asn Lys Glu Thr Leu Leu Ala Gly Arg Leu
 145 150 155 160

Val Val Gly Leu Gly Ile Gly Ile Ala Ser Met Thr Val Pro Val Tyr
 165 170 175

Ile Ala Glu Val Ser Pro Pro Asn Leu Arg Gly Arg Leu Val Thr Ile
 180 185 190

Asn Thr Leu Phe Ile Thr Gly Gly Gln Phe Phe Ala Ser Val Val Asp
 195 200 205

Gly Ala Phe Ser Tyr Leu Gln Lys Asp Gly Trp Arg Tyr Met Leu Gly
 210 215 220

Leu Ala Xaa Val Pro Ala Val Ile Gln Phe Phe Gly Phe Leu Phe Leu
 225 230 235 240

Pro Glu Ser Pro Arg Trp Leu Ile Gln Lys Gly Gln Thr Gln Lys Ala
 245 250 255

Arg Arg Ile Leu Ser Gln Met Arg Gly Asn Gln Thr Ile Asp Glu Glu
 260 265 270

Tyr Asp Ser Ile Lys Asn Asn Ile Glu Glu Glu Glu Lys Glu Val Gly
 275 280 285

FBRIC54.001APC_SeqList.txt

Ser Ala Gly Pro Val Ile Cys Arg Met Leu Ser Tyr Pro Pro Thr Arg
290 295 300

Arg Ala Leu Ile Val Gly Cys Gly Leu Gln Met Phe Gln Gln Leu Ser
305 310 315 320

Gly Ile Asn Thr Ile Met Tyr Tyr Ser Ala Thr Ile Leu Gln Met Ser
325 330 335

Gly Val Glu Asp Asp Arg Leu Ala Ile Trp Leu Ala Ser Val Thr Ala
340 345 350

Phe Thr Asn Phe Ile Phe Thr Leu Val Gly Val Trp Leu Val Glu Lys
355 360 365

Val Gly Arg Arg Lys Leu Thr Phe Gly Ser Leu Ala Gly Thr Thr Val
370 375 380

Ala Leu Ile Ile Leu Ala Leu Gly Phe Val Leu Ser Ala Gln Val Ser
385 390 395 400

Pro Arg Ile Thr Phe Lys Pro Ile Ala Pro Ser Gly Gln Asn Ala Thr
405 410 415

Cys Thr Arg Tyr Ser Tyr Cys Asn Glu Cys Met Leu Asp Pro Asp Cys
420 425 430

Gly Phe Cys Xaa Lys Met Asn Lys Ser Thr Val Ile Asp Ser Ser Cys
435 440 445

Val Pro Val Asn Lys Ala Ser Thr Asn Glu Ala Ala Trp Gly Arg Cys
450 455 460

Glu Asn Glu Thr Lys Phe Lys Thr Glu Asp Ile Phe Trp Ala Tyr Asn
465 470 475 480

Phe Cys Pro Thr Pro Tyr Ser Trp Thr Ala Leu Leu Gly Leu Ile Leu
485 490 495

Tyr Leu Val Phe Phe Ala Pro Gly Met Gly Pro Met Pro Trp Thr Val
500 505 510

Asn Ser Glu Ile Tyr Pro Leu Trp Ala Arg Ser Thr Gly Asn Ala Cys
515 520 525

Ser Ser Gly Ile Asn Trp Ile Phe Asn Val Leu Val Ser Leu Thr Phe
Page 123

530

535

540

Leu His Thr Ala Glu Tyr Leu Thr Tyr Tyr Gly Ala Phe Phe Leu Tyr
545 550 555 560

Ala Gly Phe Ala Ala Val Gly Leu Leu Phe Ile Tyr Gly Cys Leu Pro
565 570 575

Glu Thr Lys Gly Lys Lys Leu Glu Glu Ile Glu Ser Leu Phe Asp Asn
580 585 590

Arg Leu Cys Thr Cys Gly Thr Ser Asp Ser Asp Glu Gly Arg Tyr Ile
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Glu Tyr Ile Arg Val Lys Gly Ser Asn Tyr His Leu Ser Asp Asn Asp
610 615 620

Ala Ser Asp Val Glu
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Met Asp Asn
1

aga cag aat gtc acc cca gct ctg atc ttt gcc atc aca gtt gct aca 166
Arg Gln Asn Val Thr Pro Ala Leu Ile Phe Ala Ile Thr Val Ala Thr
5 10 15

atc ggc tct ttc cag ttt ggc tac aac act ggg gtc atc aat gct cct 214
Ile Gly Ser Phe Gln Phe Gly Tyr Asn Thr Gly Val Ile Asn Ala Pro
20 25 30 35

gag acg atc ata aag gaa ttt atc aat aaa act ttg acg gac aag gca 262
Glu Thr Ile Ile Lys Glu Phe Ile Asn Lys Thr Leu Thr Asp Lys Ala
40 45 50

aat gcc cct ccc tct gag gtg ctg ctc acg aat ctc tgg tcc ttg tct 310
Asn Ala Pro 55 Ser Glu Val Leu 60 Thr Asn Leu Trp 65 Ser
55 60 65

gtg gcc ata ttt tcc gtc ggg ggt atg atc ggc tcc ttt tcc gtc gga 358
Val Ala Ile Phe Ser Val Gly Gly Met Ile Gly Ser Phe Ser Val Gly

FBRIC54.001APC_SeqList.txt

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ctg ttg gct gcc act ggt ggc tgc ctt atg gga ctg tgt aaa ata gct Leu Leu Ala Ala Thr Gly Gly Cys Leu Met Gly Leu Cys Lys Ile Ala 100 105 110 115			454
gag tca gtt gaa atg ctg atc ctg ggc cgc ttg gtt att ggc ctc ttc Glu Ser Val Glu Met Leu Ile Leu Gly Arg Leu Val Ile Gly Leu Phe 120 125 130			502
tgc gga ctc tgc aca ggt ttt gtg ccc atg tac att gga gag atc tcg Cys Gly Leu Cys Thr Gly Phe Val Pro Met Tyr Ile Gly Glu Ile Ser 135 140 145			550
cct act gcc ctg agg ggt gcc ttt ggc act ctc aac cag ctg ggc ata Pro Thr Ala Leu Arg Gly Ala Phe Gly Thr Leu Asn Gln Leu Gly Ile 150 155 160			598
gtt att gga att ctg gtg gcc cag atc ttt ggt ctg gaa ctc atc ctt Val Ile Gly Ile Leu Val Ala Gln Ile Phe Gly Leu Glu Leu Ile Leu 165 170 175			646
ggg tct gaa gag cta tgg ccg gtg cta tta ggc ttt acc atc ctt cca Gly Ser Glu Glu Leu Trp Pro Val Leu Leu Gly Phe Thr Ile Leu Pro 180 185 190 195			694
gct atc ctg caa agt gca gcc ctt cca tgt tgc cct gaa agt ccc aga Ala Ile Leu Gln Ser Ala Ala Leu Pro Cys Cys Pro Glu Ser Pro Arg 200 205 210			742
ttt ttg ctc att aac aga aaa aaa gag gag aat gct acg cgg atc ctc Phe Leu Leu Ile Asn Arg Lys Lys Glu Glu Asn Ala Thr Arg Ile Leu 215 220 225			790
cag cgg ttg tgg ggc acc cag gat gta tcc caa gac atc cag gag atg Gln Arg Leu Trp Gly Thr Gln Asp Val Ser Gln Asp Ile Gln Glu Met 230 235 240			838
aaa gat gag agt gca agg atg tca caa gaa aag caa gtc acc gtg ctg Lys Asp Glu Ser Ala Arg Met Ser Gln Glu Lys Gln Val Thr Val Leu 245 250 255			886
gag ctc ttt aga gtg tcc agc tac cga cag ccc atc atc att tcc att Glu Leu Phe Arg Val Ser Ser Tyr Arg Gln Pro Ile Ile Ile Ser Ile 260 265 270 275			934
gtg ctc cag ctc tct cag cag ctc tct ggg atc aat gct gtg ttc tat Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn Ala Val Phe Tyr 280 285 290			982
tac tca aca gga atc ttc aag gat gca ggt gtt caa cag ccc atc tat Tyr Ser Thr Gly Ile Phe Lys Asp Ala Gly Val Gln Gln Pro Ile Tyr 295 300 305			1030
gcc acc atc agc gcg ggt gtg gtt aat act atc ttc act tta ctt tct Ala Thr Ile Ser Ala Gly Val Val Asn Thr Ile Phe Thr Leu Leu Ser 310 315 320			1078

FBRIC54.001APC_SeqList.txt

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tta aag aat cac tat aat ggg atg agc ttt gtc tgt att ggg gct atc Leu Lys Asn His Tyr Asn Gly Met Ser Phe Val Cys Ile Gly Ala Ile 360 365 370	1222
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ttt att gtg gcc gaa ctc ttc agc cag ggc ccc cgc cca gct gcg atg Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg Pro Ala Ala Met 390 395 400	1318
gca gtg gcc ggc tgc tcc aac tgg acc tcc aac ttc cta gtc gga ttg Ala Val Ala Gly Cys Ser Asn Trp Thr Ser Asn Phe Leu Val Gly Leu 405 410 415	1366
ctc ttc ccc tct gct gct tac tat tta gga gcc tac gtt ttt att atc Leu Phe Pro Ser Ala Ala Tyr Tyr Leu Gly Ala Tyr Val Phe Ile Ile 420 425 430 435	1414
ttc acc ggc ttc ctc att acc ttc ttg gcc ttt acc ttc ttc aaa gtc Phe Thr Gly Phe Leu Ile Thr Phe Leu Ala Phe Thr Phe Phe Lys Val 440 445 450	1462
cct gag acc cgt ggc agg act ttt gag gat atc aca cgg gcc ttt gaa Pro Glu Thr Arg Gly Arg Thr Phe Glu Asp Ile Thr Arg Ala Phe Glu 455 460 465	1510
ggg cag gca cac ggt gca gat aga tct ggg aag gac ggc gtc atg ggg Gly Gln Ala His Gly Ala Asp Arg Ser Gly Lys Asp Gly Val Met Gly 470 475 480	1558
atg aac agc atc gag cct gct aag gag acc acc acc aat gtc taa Met Asn Ser Ile Glu Pro Ala Lys Glu Thr Thr Thr Asn Val 485 490 495	1603
gtcatgcctc cttccacctc cctcccggca tgggaaagcc acctctccct caacaaggga	1663
gagactttat caggatgaac ccaggactgc ttctgaatgc tgctacttga tttcttttctc	1723
atcccacgca ctccatgagc accccaaggc tgcagtttgt tggatcttca atggctttttt	1783
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cagacttacc aggaagcaga tacatatgag tgtggaagcc ggagggtgtt tatgtaagag	2023
caccttcctc acttccatac agctctacgc ggcaaattaa cttgagtttt atttatctta	2083
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FBRIC54.001APC_SeqList.txt

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Asn Ala Pro Glu Thr Ile Ile Lys Glu Phe Ile Asn Lys Thr Leu Thr
 35 40 45

Asp Lys Ala Asn Ala Pro Pro Ser Glu Val Leu Leu Thr Asn Leu Trp
 50 55 60

Ser Leu Ser Val Ala Ile Phe Ser Val Gly Gly Met Ile Gly Ser Phe
 65 70 75 80

Ser Val Gly Leu Phe Val Asn Arg Phe Gly Arg Arg Asn Ser Met Leu
 85 90 95

Ile Val Asn Leu Leu Ala Ala Thr Gly Gly Cys Leu Met Gly Leu Cys
 100 105 110

Lys Ile Ala Glu Ser Val Glu Met Leu Ile Leu Gly Arg Leu Val Ile
 115 120 125

Gly Leu Phe Cys Gly Leu Cys Thr Gly Phe Val Pro Met Tyr Ile Gly
 130 135 140

Glu Ile Ser Pro Thr Ala Leu Arg Gly Ala Phe Gly Thr Leu Asn Gln
 145 150 155 160

Leu Gly Ile Val Ile Gly Ile Leu Val Ala Gln Ile Phe Gly Leu Glu
 165 170 175

Leu Ile Leu Gly Ser Glu Glu Leu Trp Pro Val Leu Leu Gly Phe Thr
 180 185 190

Ile Leu Pro Ala Ile Leu Gln Ser Ala Ala Leu Pro Cys Cys Pro Glu
 195 200 205

Ser Pro Arg Phe Leu Leu Ile Asn Arg Lys Lys Glu Glu Asn Ala Thr
 210 215 220

FBRIC54.001APC_SeqList.txt

Arg Ile Leu Gln Arg Leu Trp Gly Thr Gln Asp Val Ser Gln Asp Ile
 225 230 235 240
 Gln Glu Met Lys Asp Glu Ser Ala Arg Met Ser Gln Glu Lys Gln Val
 245 250 255
 Thr Val Leu Glu Leu Phe Arg Val Ser Ser Tyr Arg Gln Pro Ile Ile
 260 265 270
 Ile Ser Ile Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn Ala
 275 280 285
 Val Phe Tyr Tyr Ser Thr Gly Ile Phe Lys Asp Ala Gly Val Gln Gln
 290 295 300
 Pro Ile Tyr Ala Thr Ile Ser Ala Gly Val Val Asn Thr Ile Phe Thr
 305 310 315 320
 Leu Leu Ser Leu Phe Leu Val Glu Arg Ala Gly Arg Arg Thr Leu His
 325 330 335
 Met Ile Gly Leu Gly Gly Met Ala Phe Cys Ser Thr Leu Met Thr Val
 340 345 350
 Ser Leu Leu Leu Lys Asn His Tyr Asn Gly Met Ser Phe Val Cys Ile
 355 360 365
 Gly Ala Ile Leu Val Phe Val Ala Cys Phe Glu Ile Gly Pro Gly Pro
 370 375 380
 Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg Pro
 385 390 395 400
 Ala Ala Met Ala Val Ala Gly Cys Ser Asn Trp Thr Ser Asn Phe Leu
 405 410 415
 Val Gly Leu Leu Phe Pro Ser Ala Ala Tyr Tyr Leu Gly Ala Tyr Val
 420 425 430
 Phe Ile Ile Phe Thr Gly Phe Leu Ile Thr Phe Leu Ala Phe Thr Phe
 435 440 445
 Phe Lys Val Pro Glu Thr Arg Gly Arg Thr Phe Glu Asp Ile Thr Arg
 450 455 460

FBRIC54.001APC_SeqList.txt

Ala Phe Glu Gly Gln Ala His Gly Ala Asp Arg Ser Gly Lys Asp Gly
465 470 475 480

Val Met Gly Met Asn Ser Ile Glu Pro Ala Lys Glu Thr Thr Thr Asn
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gcccagagaga cc atg cag agg tcg cct ctg gaa aag gcc agc gtt gtc tcc 171
Met Gln Arg Ser Pro Leu Glu Lys Ala Ser Val Val Ser
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Lys Leu Phe Phe Ser Trp Thr Arg Pro Ile Leu Arg Lys Gly Tyr Arg
15 20 25
cag cgc ctg gaa ttg tca gac ata tac caa atc cct tct gtt gat tct 267
Gln Arg Leu Glu Leu Ser Asp Ile Tyr Gln Ile Pro Ser Val Asp Ser
30 35 40 45
gct gac aat cta tct gaa aaa ttg gaa aga gaa tgg gat aga gag ctg 315
Ala Asp Asn Leu Ser Glu Lys Leu Glu Arg Glu Trp Asp Arg Glu Leu
50 55 60
gct tca aag aaa aat cct aaa ctc att aat gcc ctt cgg cga tgt ttt 363
Ala Ser Lys Lys Asn Pro Lys Leu Ile Asn Ala Leu Arg Arg Cys Phe
65 70 75
ttc tgg aga ttt atg ttc tat gga atc ttt tta tat tta ggg gaa gtc 411
Phe Trp Arg Phe Met Phe Tyr Gly Ile Phe Leu Tyr Leu Gly Glu Val
80 85 90
acc aaa gca gta cag cct ctc tta ctg gga aga atc ata gct tcc tat 459
Thr Lys Ala Val Gln Pro Leu Leu Leu Gly Arg Ile Ile Ala Ser Tyr
95 100 105
gac ccg gat aac aag gag gaa cgc tct atc gcg att tat cta ggc ata 507
Asp Pro Asp Asn Lys Glu Glu Arg Ser Ile Ala Ile Tyr Leu Gly Ile
110 115 120 125
ggc tta tgc ctt ctc ttt att gtg agg aca ctg ctc cta cac cca gcc 555
Gly Leu Cys Leu Leu Phe Ile Val Arg Thr Leu Leu Leu His Pro Ala
130 135 140

FBRIC54.001APC_SeqList.txt

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	150
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agt ttg att tat aag aag act tta aag ctg tca agc cgt gtt cta gat	651
Ser Leu Ile Tyr Lys Lys Thr Leu Lys Leu Ser Ser Arg Val Leu Asp	
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	165
	170
aaa ata agt att gga caa ctt gtt agt ctc ctt tcc aac aac ctg aac	699
Lys Ile Ser Ile Gly Gln Leu Val Ser Leu Leu Ser Asn Asn Leu Asn	
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	180
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aaa ttt gat gaa gga ctt gca ttg gca cat ttc gtg tgg atc gct cct	747
Lys Phe Asp Glu Gly Leu Ala Leu Ala His Phe Val Trp Ile Ala Pro	
	190
	195
	200
	205
ttg caa gtg gca ctc ctc atg ggg cta atc tgg gag ttg tta cag gcg	795
Leu Gln Val Ala Leu Leu Met Gly Leu Ile Trp Glu Leu Leu Gln Ala	
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tct gcc ttc tgt gga ctt ggt ttc ctg ata gtc ctt gcc ctt ttt cag	843
Ser Ala Phe Cys Gly Leu Gly Phe Leu Ile Val Leu Ala Leu Phe Gln	
	225
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	235
gct ggg cta ggg aga atg atg atg aag tac aga gat cag aga gct ggg	891
Ala Gly Leu Gly Arg Met Met Met Lys Tyr Arg Asp Gln Arg Ala Gly	
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	245
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aag atc agt gaa aga ctt gtg att acc tca gaa atg att gaa aat atc	939
Lys Ile Ser Glu Arg Leu Val Ile Thr Ser Glu Met Ile Glu Asn Ile	
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	265
caa tct gtt aag gca tac tgc tgg gaa gaa gca atg gaa aaa atg att	987
Gln Ser Val Lys Ala Tyr Cys Trp Glu Glu Ala Met Glu Lys Met Ile	
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	275
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gaa aac tta aga caa aca gaa ctg aaa ctg act cgg aag gca gcc tat	1035
Glu Asn Leu Arg Gln Thr Glu Leu Lys Leu Thr Arg Lys Ala Ala Tyr	
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	295
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gtg aga tac ttc aat agc tca gcc ttc ttc ttc tca ggg ttc ttt gtg	1083
Val Arg Tyr Phe Asn Ser Ser Ala Phe Phe Phe Ser Gly Phe Phe Val	
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	310
	315
gtg ttt tta tct gtg ctt ccc tat gca cta atc aaa gga atc atc ctc	1131
Val Phe Leu Ser Val Leu Pro Tyr Ala Leu Ile Lys Gly Ile Ile Leu	
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	330
cgg aaa ata ttc acc acc atc tca ttc tgc att gtt ctg cgc atg gcg	1179
Arg Lys Ile Phe Thr Thr Ile Ser Phe Cys Ile Val Leu Arg Met Ala	
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	340
	345
gtc act cgg caa ttt ccc tgg gct gta caa aca tgg tat gac tct ctt	1227
Val Thr Arg Gln Phe Pro Trp Ala Val Gln Thr Trp Tyr Asp Ser Leu	
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	365
gga gca ata aac aaa ata cag gat ttc tta caa aag caa gaa tat aag	1275
Gly Ala Ile Asn Lys Ile Gln Asp Phe Leu Gln Lys Gln Glu Tyr Lys	
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	375
	380
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FBRIC54.001APC_SeqList.txt

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Thr	Ala	Phe	Trp	Glu	Glu	Gly	Phe	Gly	Glu	Leu	Phe	Glu	Lys	Ala	Lys		
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caa	aac	aat	aac	aat	aga	aaa	act	tct	aat	ggt	gat	gac	agc	ctc	ttc	1419	
Gln	Asn	Asn	Asn	Asn	Arg	Lys	Thr	Ser	Asn	Gly	Asp	Asp	Ser	Leu	Phe		
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ttc	agt	aat	ttc	tca	ctt	ctt	ggt	act	cct	gtc	ctg	aaa	gat	att	aat	1467	
Phe	Ser	Asn	Phe	Ser	Leu	Leu	Gly	Thr	Pro	Val	Leu	Lys	Asp	Ile	Asn		
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Phe	Lys	Ile	Glu	Arg	Gly	Gln	Leu	Leu	Ala	Val	Ala	Gly	Ser	Thr	Gly		
				450					455					460			
gca	ggc	aag	act	tca	ctt	cta	atg	atg	att	atg	gga	gaa	ctg	gag	cct	1563	
Ala	Gly	Lys	Thr	Ser	Leu	Leu	Met	Met	Ile	Met	Gly	Glu	Leu	Glu	Pro		
			465					470					475				
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Ser	Glu	Gly	Lys	Ile	Lys	His	Ser	Gly	Arg	Ile	Ser	Phe	Cys	Ser	Gln		
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ttt	tcc	tgg	att	atg	cct	ggc	acc	att	aaa	gaa	aat	atc	atc	ggt	gtt	1659	
Phe	Ser	Trp	Ile	Met	Pro	Gly	Thr	Ile	Lys	Glu	Asn	Ile	Ile	Gly	Val		
		495				500					505						
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Ser	Tyr	Asp	Glu	Tyr	Arg	Tyr	Arg	Ser	Val	Ile	Lys	Ala	Cys	Gln	Leu		
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Glu	Gly	Gly	Ile	Thr	Leu	Ser	Gly	Gly	Gln	Arg	Ala	Arg	Ile	Ser	Leu		
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Ala	Arg	Ala	Val	Tyr	Lys	Asp	Ala	Asp	Leu	Tyr	Leu	Leu	Asp	Ser	Pro		
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Phe	Gly	Tyr	Leu	Asp	Val	Leu	Thr	Glu	Lys	Glu	Ile	Phe	Glu	Ser	Cys		
	575					580					585						
gtc	tgt	aaa	ctg	atg	gct	aac	aaa	act	agg	att	ttg	gtc	act	tct	aaa	1947	
Val	Cys	Lys	Leu	Met	Ala	Asn	Lys	Thr	Arg	Ile	Leu	Val	Thr	Ser	Lys		
590					595					600					605		
atg	gaa	cat	tta	aag	aaa	gct	gac	aaa	ata	tta	att	ttg	aat	gaa	ggt	1995	
Met	Glu	His	Leu	Lys	Lys	Ala	Asp	Lys	Ile	Leu	Ile	Leu	Asn	Glu	Gly		
				610					615					620			
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FBRIC54.001APC_SeqList.txt

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FBRIC54.001APC_SeqList.txt

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FBRIC54.001APC_SeqList.txt

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	Lys	Ser	Thr	Leu	Leu	Ser	Ala	Phe	Leu	Arg	Leu	Leu	Asn	Thr	Glu
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FBRIC54.001APC_SeqList.txt

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 1370 1375 1380

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Cys Glu His Arg Ile Glu Ala Met Leu Glu Cys Gln Gln Phe Leu
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Val Ile Glu Glu Asn Lys Val Arg Gln Tyr Asp Ser Ile Gln Lys
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FBRIC54.001APC_SeqList.txt

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